

THE IMPACT OF ATTENDING A COLLEGE ORIENTATION CLASS ON
RETENTION, PERSISTENCE, AND TIME TO DEGREE COMPLETION
OF FIRST TIME COMMUNITY COLLEGE STUDENTS

By

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DEDICATION

This project is dedicated with love to my mother,
Myra Jean Watson,
and to the memory of my late father,
Joe Andrews Watson.

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Abstract of Dissertation Presented to the Graduate School
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By

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The purpose of this research was to study the relationship between taking a community college orientation class during the first term and the retention, persistence, and time to degree completion of first time community college students.

A computer search of the historical data base from four academic institutions in Florida generated a sample of 1,400 students who had enrolled for the first time in college. All participants were academically prepared for college level work. The academic performance and persistence of students who had completed a college orientation class during their first term was compared to students that did not take a college orientation class during their first term in college. Measurements were taken at the end of the first term and at the end of the first, second, third, and fourth years. An analysis of variance model was utilized to address the research questions.

Results of the statistical analysis revealed that that taking a college orientation class the first term at a community college does not have an affect on retention, course withdrawal patterns, grade point averages, course repetitions patterns, and the total number of credit hours at time of graduation. A discussion of the limitations of the project, implications of the findings, and recommendations for further research was presented.

CHAPTER I INTRODUCTION

Student retention in the community college remains a critical issue in higher education. Statistics show that approximately 50% of freshmen enrolled in higher education drop out before completing their programs (Brawer, 1996). This number has remained fairly stable since Summerskill's (1962) early study of retention. Over half of students entering higher education start in a community college. Enrollment in community colleges rose from 500,00 students in 1960 to over 5.5 million in 1991 (Alsalam, 1993). Researchers indicated that the dropout rate tends to be higher for community colleges than for 4-year colleges and universities (Bean & Metzner, 1985; Dougherty, 1994; El-Khawas, 1988; Jones, 1988; Tinto, 1993). Cope and Hannah (1975) indicated that approximately 50% of community college students remain in school after their first year. Of those who remain, only 50% go on to complete an associate degree.

Many studies indicate that a student's decision to drop out of higher education is usually made during the freshman year (Bean, 1980; Dunphy, Miller, Woodruff, & Nelson, 1987; Feters, 1977; Pantages & Creedon, 1977; Rootman, 1972). Furthermore, the majority of students make their decision to leave school during the first 6 weeks of the freshman year (Blanc, DeBuhr, & Martin, 1983; Gardner, 1989; Levitz & Noel, 1989; Noel, 1985; Zarvel et al., 1991). These sequences appear to imply specific patterns of

student departure. Finding appropriate strategies to assist community college students in the completion of their educational goals continues to be a priority.

College persistence is affected, to a great degree, by the process of interactions between the students and the institution. A substantial body of research suggests that integration into the social and academic systems of the college or university is essential to academic success and achievement (Astin, 1977, 1993; Halpin, 1990). Yet, how students achieve integration is not clear (Tinto, 1987).

Theoretical Framework

Van Gennep (1960) studied the movement of individuals from membership in one group to membership in another. His work in social anthropology was concerned with societal revitalization and social stability during times of change. He identified three stages in this process: separation, transition, and incorporation. Van Gennep theorized that formal rituals and ceremonies help incorporate persons into a new community by providing rites of passage. The theoretical work of Tinto (1993) acknowledges this transition process and focuses upon the role of student integration into college life. One of the principal transitions for college students involves moving from their home community to the campus community. Tinto views colleges and universities as small societies made up of distinct academic and social components. For students to become incorporated and to establish membership within that society, they need to become integrated into the social and academic systems that exist on campus (Tinto, 1993).

Spady (1970) was the first to apply Durkheim's (1951) theory of community and suicide to the subject of educational persistence. Building upon Spady's work, Tinto

developed a theory of student departure from higher education (Tinto, 1975). Durkheim suggested that suicide may result when an individual is unable to integrate and establish membership within a society. Tinto proposed that this model is analogous to student departure from education. Tinto (1988) maintained that during the freshman year students may feel a sense of normlessness. He stated that "having given up the norms and beliefs of past associations and not yet having adopted those appropriate to membership in a new community, the individual is left in a state of at least temporary anomie" (pp. 442-443). Integration into a campus community may also be more difficult for students whose families, community, and/or schools had very different norms and patterns of behavior than that of the new college (Chapman & Pascarella, 1983; Smith 1982; Tinto 1986, 1993).

Tinto (1993) theorized that students enter a college or university with varying patterns of personal, familial, and academic characteristics and skills. These attributes help to set boundaries of individual attainment and color the character of individual experience within the institution. These patterns include the student's initial disposition and intentions regarding college attendance and his/her personal goals. On the individual level, the attributes of intention and commitment represent what Tinto refers to as primary roots of departure. Intention refers to a student's value and willingness to work for degree attainment. Researchers have observed that students who have definite or advanced degree aspirations were more likely to persist than those with lower or undetermined degree goals (Astin 1975, Lenning, Beal, & Sauer, 1980; Tinto, 1975, 1986, 1993). Commitment refers to both the individual's educational/occupational goals and to

his/her goal of studying at a specific school. Students with identified career goals and a sense of purpose are more likely to persist in college (Boe & Jolicoeur, 1989; Gordon, 1989; Kester, 1980; Raimst, 1981). In 2-year colleges, goal commitment seems to have a stronger effect on retention than does institutional commitment (Chapman & Pascarella, 1983; Pascarella & Chapman, 1983b).

The student's intention and commitment become modified and reformed on a continuing basis through a series of interactions between the individual and the academic and social systems of the school. Tinto (1987) suggested that once a student enters an institution, experiences occur within the academic and social systems that involve interactions with faculty, staff, and other students. If those interactions are positive and the student becomes engaged with those systems, then the student's goals and his/her institutional commitment will be strengthened. Satisfying and rewarding encounters with the formal and informal academic and social systems are presumed to lead to greater integration and to student retention. If the experiences are negative and the student fails to become integrated within the institution, the student will be more likely to withdraw.

A wide variety of experiences and interactions with the institution will influence student integration. Tinto (1993) identified four significant areas of individual experiences with the institution that impact student departure. Tinto classified these clusters as adjustment, difficulty, incongruence, and isolation. The experiential outcomes of these interactions will reshape and modify the student's intentions and commitments.

External forces that influence interaction with the institution include outside obligations and personal finances. Obligations refer to student responsibilities to family

and work, whereas finances refer to the process that subsidize college attendance. External factors have been found to have a significant influence on student's decision to drop out at commuter institutions (Bean & Metzner, 1985; Tinto 1993).

Responding to research that had been conducted with students from commuter and 2-year institutions, Tinto (1993) revised his original model of college student departure. Tinto addressed the relatively greater influence of academic integration than social integration for commuting students (Fox, 1986; Pascarella & Chapman, 1983b; Pascarella & Wolfe, 1985; Tinto, 1987, 1993). This emphasizes that commuter students' involvement with the campus will be predominantly academically oriented contact. Chickering (1974) suggested that, due to the nature of commuter institutions, commuter students were less involved in extracurricular activities than their residential counterparts. In addition, Tinto considered the influence of external commitments for community college students. Tinto's revised model also includes intentions and external commitments as influencing, and being influenced by, initial and later goal and institutional commitments.

Institutions of higher education have few, if any, formal rituals or ceremonies to help incorporate students into their social and academic systems. Orientation programs provide a commencement ceremony that introduces the student to the new educational community. The goals of orienting students to the resources of the institution and facilitating their adaptation to the collegiate community has been the primary purpose of orientation programs. Orientation programs are believed to influence students' attitudes about higher education and help form the relationship between students and their

institution (Martin & Dixon, 1989). Tinto (1987) referred to orientation programs as "the beginnings of integration" (p. 146).

The college orientation class, when compared with other forms of orientation processes, more fully integrates the student into the social and academic systems of college (Astin, 1993). The primary goal of an orientation class is to promote retention through a student's integration into the academic and social systems of the institution (Gardner, 1986).

The college orientation class is designed to provide students with an overview of school and services available, develop their academic skills, and to establish connections to both the academic and social community on campus. Pascarella, Terenzini, and Wolfe (1986) argued that students exposed to a freshman orientation course will be somewhat more successfully integrated into the academic and social system during the first year. They indicated that greater integration produced by an orientation course would lead to increased commitment and to a lower likelihood of voluntary withdrawal from the institution.

Cuseo's (1991) review of the literature related to college orientation classes led to his classification of seven specific curriculum content areas. The areas common to most classes include (a) the meaning, value and expectations of a liberal arts education, (b) self-concept and self-esteem, (c) problem solving and decision making: selection of a college major and a future career, (d) goal setting and motivation, (e) learning skills and strategies, (f) self-management: managing time and stress, and (g) interpersonal relations. Each of these subject areas respond to one of the four clusters of individual experience with the

institution that Tinto suggests shapes the individual's relationship with the college. The mentoring nature of the student/faculty relationship, plus the opportunity to interact in the course, allows students to build relationships within an academic setting during their first term.

Creating positive interactions is critical on the community college campus. The community college has a special need to connect the student with the institution. A student may spend less time at school than he/she does with work and satisfying family obligations. Without the programming and developmental opportunities provided by a residential campus environment, community colleges must develop approaches to promote success and persistence for commuter student. Glass and Garrett (1995) found that completion of an orientation program in community college during the first term of enrollment promotes and improves student performance regardless of age, gender, race, major, entrance exam scores, or employment status.

Statement of the Problem

The community college is faced with new conditions that could limit many students' ability to succeed. Two related situations warrant close attention. The first is the growing number of individuals entering higher education at a rapid rate. The second is changes in college policy, influenced by new budgeting procedures and fiscal guidelines, and its impact upon student development processes.

The state of Florida, as well as the rest of the nation, is experiencing a rising wave of student enrollment that is not expected to peak until the end of the next decade. High school graduations in the state of Florida are expected to grow from 89,397 in 1996 to

approximately 134, 766 in the year 2008 (Business/ Higher Education Partnership. 1997). As these students seek to continue their education, college and university systems will be stressed to maintain current levels of performance. As it was the case for their parents, the community college will remain the primary point of entry into higher education for most of the new "baby boom echo" students. Community college administration will need to find more effective and efficient ways of servicing this growing population. A potential problem exists, however, in the possibility of diluting services to accommodate larger numbers of students.

The second challenge has evolved from recent changes in the funding procedures for higher education. The state of Florida has adopted new accountability measures that community colleges must employ to evaluate their educational effectiveness (Florida Community College System, 1993). Community colleges are now directed to measure specific information regarding enrollment, persistence, and completion of degree programs. Budgeting procedures, including monetary reward, will focus on student program completion. Performance-based budgeting places an emphasis on the retention and degree completion of students. Student success is assessed by quantitative outcome measures. Institutions that can address legislative concerns with data will be better able to obtain the means to serve various student populations (Grunder & Hellmich, 1996).

Students who have not developed an initial educational focus may be penalized or blocked from their goals. Current Florida legislation (Florida Statute 239.117, 1995a; Florida Statute 240.115, 1995b; Florida Statute 239.249, 1996) is changing institutional

policy regarding course withdrawal, grade forgiveness, and additional tuition charges for course repetitions and excess hours beyond degree requirement. These changes are designed to make the educational delivery system more efficient. The time available for students to pursue self-discovery and the clarification of educational and life goals will be limited by the new policies. Problems are created when changes in policy create roadblocks for student progress.

College interventions that provide students with early survival strategies can help them to persist and succeed in college. Programs that promote student success also facilitate the economical distribution of educational resources to a larger number of students. College orientation classes can enhance student retention, academic performance, and efficient degree completion.

Need for Study

Many studies have indicated a positive association between students taking a college orientation course and their retention from freshman to sophomore status within 4-year institutions. Noel, Levitz, and Saluri (1985), however, noted that the study of retention at the community college has been significantly less than that at the 4-year institution. There is a need to look closer at retention efforts at the community college.

Most studies of colleges' orientation classes focus on the first year impact of the course, but the long-term impact is not known. Napoli (1996) found that the impact of social integration is greatest for term-to-term persistence, yet diminishes over time. Belcher, Ingold, and Lombard (1987) discovered that the impact of a college orientation class on GPA and the course's positive influence for nontraditional students diminishes

over time. It is not clear if the impact of initial retention success will continue through to degree completion. Woodward's (1982) study of seminar programs at some selected institutions found different results. He found college orientation classes to lack impact on retention and felt it was due, in part, to the short duration of many studies. Also, retention had been calculated at the beginning of the first semester rather than at the beginning of sophomore year. He advocated that a 2-to-5-year longitudinal study was necessary to determine real impact on retention and program goals. Tinto (1993) also called for longitudinal studies of all retention efforts.

There is little information about the impact of college orientation classes upon the persistence of students viewed as likely to succeed in college, and it is not clear the extent to which college orientation classes at the community college benefit students with poor academic skills. It is not known, therefore, if integration strategies are less effective in promoting persistence for students academically prepared for college. Reinertson (1986) and Webb (1988) stated that academic ability is a significant variable to understanding retention. Astin (1972, 1985) and Moline (1987) found the level of academic ability, as indicated by college admission test scores, to be a strong predictor of persistence. Although dropouts scored lower on standardized tests designed to measure ability than did persisters (Cohen & Brawer, 1982; DiCarlo, 1980), Tinto (1987) stated that less than 15% of all student departures results from academic dismissal. By holding academic ability constant, a better understanding of the impact of integration strategies at the community college can be achieved. There is a need to determine if a college orientation class benefits students viewed as academically prepared for college.

Purpose of Study

The purpose of this study was to explore whether there is a significant relationship between taking a community college orientation course during the first term and the retention, persistence, and time to degree completion of students. This study investigated if an orientation course has value as a retention strategy for the academically prepared student entering the community college. An examination was made of whether an orientation class impacts retention, the student's GPA over the long term, and the total number of credit hours required to complete the degree.

The study retrospectively compared the progress of two populations over the period of 4 years. A group of female and male students that has completed an orientation class during their first term in college was examined against a group that has not taken a similar course. Only students classified as academically prepared for college were included in the study. For the purpose of this investigation, college academic readiness is considered exempting participation in college preparatory classes according to state of Florida standards for the fall of 1991.

To help understand institutional effect, subjects were chosen from four different community colleges. Due to the inability to manipulate the student population's variables in a "real world" environment, an ex post facto design was used in this research (Smith & Glass, 1987). Data for the study were gathered through a computer search of the historical database files at each institution covering the 4-year period. This study investigated the variable of attending a college orientation class as it relates to college retention and time to completion for community college students.

Research Questions

1. Is there a difference between students who have taken a college orientation class and those who have not taken a college orientation class (in their first term) in retention after 1 year, 2 years, 3 years, and 4 years?
2. Is there a difference between students who have taken a college orientation class and those who have not taken a college orientation class (in their first term) in number of class withdrawals after 1 year, 2 years, 3 years, and 4 years?
3. Is there a difference between students who have taken a college orientation class and those who have not taken a college orientation class (in their first term) in GPA after 1 year, 2 years, 3 years, and 4 years?
4. Is there a difference between students who have taken a college orientation class and those who have not taken a college orientation class (in their first term) in total number of courses repeated after 1 year, 2 years, 3 years, and 4 years?
5. Is there a difference between students who have taken a college orientation class and those who have not taken a college orientation class (in their first term) in total number of credit hours at time of graduation?
6. Do age, gender, and race interact with taking a college orientation course (in their first term) to affect retention, course withdrawal, GPA, courses repeated, and number of credit hours taken at time of graduation?

Definition of Terms

For the purpose of this study, the following definitions were used:

Academically prepared students are all students who are eligible to enter the community college and do not test into college preparatory classes according to state standards for the fall of 1991.

Attrition is the loss in student population from higher education in the normal course of events.

College orientation class is a college level course that provides an opportunity for students to develop effective strategies and techniques to succeed in college. The class also provides the opportunities to practice these newly acquired skills in a supportive environment while adjusting to the academic and social expectations of college life.

Course repetition is additional registrations for the same class beyond the initial attempt.

Persistence is academic involvement that extends steadily without interruption over a lasting period of time.

Retention is maintaining a fixed state of enrollment until degree completion.

Withdrawal from class is the removal of a student from a class prior to the end of the term.

Organization of the Study

The remainder of this study is organized into four chapters. Chapter 2 presents a review of the literature on community college retention as it relates to college orientation classes. Chapter 3 contains a description of the methodology and research design of the

study. In Chapter 4 the results for each of the dependent variables are reported. The discussion of the results, the limitations of the study, implications of the findings and recommendation for future research, and conclusion are discussed in Chapter 5.

CHAPTER 2

REVIEW OF THE RELATED LITERATURE

This chapter presents a review of the literature concerning student attrition and retention in higher education. It is organized as follows: (a) a brief description of attrition/retention studies, (b) a discussion of some significant variables associated with retention, (c) an overview of studies focusing upon Tinto's variables of attrition/retention, and (d) a review of college orientation class studies.

General Attrition/Retention Studies

Attrition in higher education is the loss of students from the institution during the normal course of their program. Retention efforts attempt to reduce the size of this loss and retain a greater number of students until their educational goals have been met. Summerskill (1962) reviewed 35 attrition studies conducted over a 40-year period from 1914 to 1953. His findings showed that approximately half of the students first matriculated in college were not enrolled by the end of 4 years. In addition, he documented that nearly 31% of students withdrew during or at the end of the first year and that the graduation rate at the end of 4 years was just below 40%. According to Summerskill, the percentage of students leaving college over a 4-year period did not change significantly in the 4 decades studied. Ten years later, Cope and Hannah (1975) observed that the national attrition rate had continued to be high for over half a century and seemed to change little over time.

Raimst's (1981) summarized national statistics relating to retention and attrition from all types of higher education institutions. His findings revealed that approximately 35% to 40% of entering college students graduated with bachelor's degrees within 4 years from the initial date of entry, that 45% to 60% graduated from some college within 4 years, and that anywhere from 10% to 35% would never receive a college degree. Similarly, Tinto (1987) stated that in 1986 approximately 2.8 million students began college for the first time. He estimated that 1.6 million of these students would leave their first institution without receiving a degree, and approximately three-quarters of these students who departed from their initial institution would leave the higher education system without earning any type of college degree.

Smith (1996) reported that among students who began their postsecondary education at a community college in 1989-90, 37% completed a degree at some institution by 1994. Of these students, 22% completed a certificate or an associate's degree at their first institution. Those who did not complete an award at their first institution spent a substantial amount of time there--an average of 14 months of enrollment. Nineteen percent of 1989-90 community college beginners transferred to a public 4-year institution, and 3% transferred to a private 4-year institution. Of those who transferred to a 4-year institution, 38% completed an associate's degree before transferring. By 1994, 26% of those who transferred to 4-year institutions had completed a bachelor's degree, and 47% were still enrolled at a 4-year institution (Smith, 1996).

Cope (1978), Cope and Hannah (1975), Hackman and Dysinger (1970), and Tinto (1975, 1985) believed that researchers have had a tendency to overestimate the actual attrition problem as a result of definitional problems. Eckland (1964) stated that early studies of attrition rates have been exaggerated due primarily to the failure of these studies to allow for the prolonged nature of academic career and for the dropouts who came back or transferred to other institutions. It is not unusual for students to discontinue temporarily their college studies for a semester, an entire year, or more. Because the loss is temporary in such cases, Rugg (1983) suggested that these students should be labeled stopouts to distinguish them from dropouts whose discontinued enrollment is considered permanent. When this distinction is overlooked, attrition figures can be significantly inflated. Pantages and Creedon (1978) noted a beginning trend in the literature to use multiple categories in classifying dropouts and non-dropouts to allow finer discrimination between categories and clearer interpretation of results. Yet, Astin (1972) encouraged the recognition that there can never be a wholly satisfactory definition of the term dropout until all students either obtain their degrees or die without obtaining a degree.

Variables Associated with Attrition and Retention

Several variables significant to this study merit individual review. The variables of gender, race/ethnicity, and age are isolated for separate investigation. Differences between the impact of attendance at a community college versus the initial attendance at a 4-year institution is also explored to help understand what unique influences are provided by each institution.

Gender. Studies have shown mixed results when addressing the influence of gender upon attrition. Gender has been reported to have either a negative or neutral impact upon academic progress.

Tinto (1975) found that women drop out from higher education more frequently than men. Relating persistence to gender and grades, Astin's early research (1972) showed that women earn higher grades than men in high school and in college. Although he does not account for the phenomenon, he also found that women are more likely to drop out of college after the freshman year than men in spite of superior academic performance. Studies by Brophy (1986) and Ramaker (1987) concluded that the typical 2-year college dropout was likely to be female, adding to the positing that women are at greater risk of leaving college prematurely.

A study at Virginia's Mountain Empire Community College attempted to determine the reasons behind an unusually high rate of student attrition. The study was undertaken by reviewing withdrawal forms and conducting a telephone survey with a representative sample of students. Results indicated that more females than males withdrew from all classes before the end of the semester (Sydow & Sandel, 1996). In contrast, other studies show attrition being higher for men. Kester in a 1980 report stated that gender is one of the two most important determining variables relating to persistence. His findings reveal that women are more likely to complete undergraduate degrees in 4 years. Nespoli and Radcliffe (1983) and Adelman (1991) concluded that females at community colleges were more likely to persist in their studies than males.

Other studies, however, indicate little difference in rates of attrition between the sexes. Pantages and Creedon (1978) concluded that there was strong evidence that sex was not a significant variable in determining persistence or attrition. Bean's (1980) findings showed little evidence that men and women differ significantly in persistence patterns. In a four-semester study at Atlantic Community College to determine which factors affected retention, Wall (1996) found that gender and ethnicity variables were not related to retention.

Race/ethnicity. The 2-year college student population reflects the diversity of race and culture found in the institution's community. The 2-year college population often includes a large percentage of minority students. The clustering of minority students in 2-year institutions may be attributed to a number of factors, including proximity, low cost, the open access policy, and social accessibility of community colleges. Bower (1996) stated that the presence of large numbers of minority students in community colleges makes the issue of minority students' achievement an important issue for these institutions. Bower pointed out that when they enter the community college, many minority freshmen will also bring with them one or more academic "at-risk" characteristics. Jones and Watson (1990) and Smedley, Myers, and Harrell (1993) indicated that these often include poor academic background, low self-concept, and being a first-generation student in college.

Considering that the vast majority of community college students are White, studies have found a disproportionate percentage of dropouts to be from minorities, especially African Americans, Hispanics, and American Indians (Baker, 1986; Gold,

1981; Johnston, 1982). Mingle (1987) indicated that only 1 in 7 African Americans and 1 in 10 Hispanics who enroll in college after high school will achieve senior status in 4 years. The attrition rate for certain minority groups is higher than the national average for all students.

Astin (1972) found that African American students had somewhat lower persistence rates than non-African Americans but suggested that the relatively high attrition rates of these students at 4-year colleges or universities were entirely attributable to their relatively low high school grades and ability test scores. He added that, in actuality, African American students were less likely to drop out than were non-African American's when abilities and past achievements were comparable. In a follow-up study, Astin (1973) held constant the academic factors in students' backgrounds (e.g., high school rank and scholastic aptitude test scores) and found no significant differences for students who were African American, Asian, or American Indian.

Ramaker (1987) also found no significant difference in persistence for minority students when observing student departure at the end of each academic term. If one looks at withdrawal at different points in time over the length of the term, different departure patterns appear. Ramaker discovered students leaving during the midpoint of the term to be significantly more likely to be members of minority groups.

A survey of first time students entering Montgomery College, Maryland, in fall 1990 was conducted to collect data on student attitudes, enrollment behavior, and educational goals. It was part of a study to identify factors related to student success

and nonsuccess, particularly among African American students. Previous studies at the school have revealed that African American students enrolled part-time have the lowest semester-to-semester retention rates (less than 50%), while full-time African American students have a retention rate of more than 75%. In this study surveys were returned by 1,261 first-time students for a 46% response rate. Findings included information that while African American students more frequently intended to earn a degree as compared to other students, they more often attended on a part-time basis (77%). Also, African American students more frequently reported having concerns about financing their education than other groups (Lanni, 1992).

A study by Walker (1988) surveyed strategies used by 88 community colleges in Arizona, California, New Mexico, and Texas to meet educational needs of Hispanic students and the relationship between these strategies and Hispanic student retention rate. Questionnaires were sent to southwestern community colleges requesting information on retention rates and strategies in effect. An analysis of retention rates showed that retention was improved by financial aid, career counseling into selective programs, bilingual education, ESL classes, and Hispanic studies classes (Walker, 1988).

A focus group study of influences of first-time Hispanic community college students was conducted by Jalomo (1995). Despite the 90% growth of Hispanic student enrollment between 1980 and 1991, colleges are not retaining these students. Student-related factors influencing attrition include poverty, unemployment, social class origins, inadequate academic preparation, weak study habits, self-doubt, low self-

esteem, and cultural separation. Jalomo's study indicated student perceptions about learning ability are influenced by previous academic achievement and past interactions with faculty and peers, both in and out of class.

Overall, at least 60% of White students who enter college obtain a degree, but less than one-third of the American Indian college students graduate (Carnegie Foundation for the Advancement of Teaching, 1989). Guyette and Heth (1983) estimated the dropout rate for American Indians to be as high as 80%. Wells (1989) indicated that nearly three out of four American Indian college students fail to earn degrees because of poor academic preparation, inadequate financial aid, or personal problems.

A factor contributing to the high attrition rate of students of color is their expectations of higher education. Students of color are generally first-generation college students and have not had the advantage of hearing their parents mention what college was like for them (Quevedo-Garcia, 1987). Students of color enter their first year of college with expectations that courses and examinations will resemble their experiences from high school. Ross (1990) pointed out that many differences between high school and college are not readily apparent to first-generation college students. Academic familiarity, realistic self-appraisal, and positive self-concept have been related to persistence for African American students (Tracey & Sedlacek, 1985).

Age. Age as a variable reflects conflicting reports in the literature. Astin's (1975) work supports the notion that age is related to attrition and that older students are less likely to persist. The rate of degree completion for adult students in

undergraduate degree programs is low when compared with traditional students (Bean & Metzner, 1985). Notwithstanding, Naretto (1995) stated that the research on retention of adult students in higher education has been scattered and is usually institution-specific.

Studies by Windham (1994) and Price (1993) indicated persisters at the community college to be younger students and nonpersisters to be older students. Sydow and Sandel (1996) found students between the ages of 20 and 25 were 1.77 times more likely to withdraw than students 19 or younger. Mohammadi, (1994) in a study of 3,019 students at Patrick Henry Community College in Virginia found attrition rates after 1 year to be higher for those in the age ranges of 23-35 and 45-50.

Feldman (1993) studied pre-enrollment variables as predictors of 1-year retention. When observing 1,140 first-time community college students, Feldman found the risk of dropping out was associated with young students between 20-24 years old, lower high school grade point average, part-time attendance, and being a member of an ethnic minority other than Asian.

Staman (1980), Malin, Bray, Dougherty, and Skinner (1980), and Haggerty (1985) found external factors to be an important reason for adult nonpersistence and encouraged consideration of such influences in future studies and models for adult student retention. Swift (1987) reviewed a series of studies on the retention of adult students and found that not all of the researchers supported the same findings. The studies were primarily related to the characteristics of persisters and nonpersisters; he

did note, however, a tendency for adult persisters to be enrolled full time and for external influences to be the usual cause for nonpersistence.

Bean and Metzner's (1985) theoretical model of adult student attrition contended that external environmental variables exert more influence than academic variables on degree completion. Yet, a study conducted by Metzner and Bean in 1987 did not support the hypothesis that external environmental variables exert more influence than social integration on adult students' decision to persist, or not persist, to degree completion.

In a study by Naretto (1995) of persistence of adult students at 4-year institutions, the only significant difference in demographic data was GPA--3.39 for completers and 3.14 for noncompleters. This supports the concept that adult students, in general, are good students (Apps, 1991; Ross, 1989). In this study a greater number of nonpersisters were part-time students. Also, nonpersisters were employed for longer hours than persisters. It appears from this study that membership in a supportive community is an important factor in explaining the persistence of adult students to degree completion. The Bean/Metzner (1985) concept that because adult students are usually commuters they are not subject to the socializing influences of the college environment is not supported by this study. For persisters, negative experiences and influences were balanced out by positive expressions of support and encouragement. This study suggests that socialization, or connection with the campus community, is very important to adult students.

Community College/4-Year Institution

Although the role and function of the community college at times may appear on the surface as being similar to the first 2 years of the 4-year schools, the community college possesses unique characteristics. Observing outcome measures from research helps to establish a base upon which to understand fundamental differences.

When important student background differences (grade point average, entry tests, socioeconomic status) are held constant, students who initially enroll in 2-year colleges seeking a bachelor's degree are significantly less likely to complete their bachelor's degree in the same period of time as their counterparts who initially enroll in a 4-year college or university (Crook & Lavin, 1989; Dougherty, 1987, 1992; Hilton & Schrader, 1986; Pascarella & Terenzini, 1991, Temple & Polk, 1986). In addition, freshman-to-sophomore attrition at public 2-year colleges is appreciably higher than at all other types of higher education institutions (American College Testing Program, 1993).

In one public educational system, first-year retention of first-time full-time students by institution, race, and admission status indicated that system-wide 4-year colleges had a 71.1% and 2-year colleges a 58.2% retention rate. Multiple-year retention revealed a fall 1984 through fall 1993 retention rate of 56.4% for 4-year institutions and 42% for 2-year institutions (University System of Georgia, 1994).

Gates and Creamer (1984) cited a 50% attrition rate for community colleges and stated that some researchers "emphasize that two-year colleges attract students with attributes associated with attrition or non-persistence" (p. 39). However, they stated

that the determinants of retention/attrition are not shaped by the type of students enrolled in 2-year colleges but are influenced significantly by institutional conditions such as programs, policies, organizational patterns, and interactive climate after student matriculation. A study of the possible influence of a college's structure and organization on students' effective development suggest that students' academic and social integration tend to mediate the influences of structural characteristics (Pascarella, 1985a). Astin, Korn, and Green (1987) cautioned that comparing rates from different types of institutions can be very misleading.

Pascarella and associates (Pascarella et al., 1994b) described a study comparing the relative benefits of initial attendance at a 2- or 4-year college, focusing specifically on freshman-year changes in enjoyment of diversity and intellectual challenge, learning for self-understanding, internal locus of attribution for academic success, and preference for higher order cognitive activities. The study compared a population of community college students to a population of commuter students at a large 4-year research institution. There were no statistically significant differences found between 2- and 4-year college students on any of four scales measuring end-of-freshman year orientation toward learning. In addition, the institutional parity in first-year impacts appeared to be general rather than conditional.

Looking at the long-term impact of initial attendance at either a community college or a 4-year institution, Whitaker and Pascarella (1994) studied data from the National Longitudinal Study of the High School Class of 1972. They observed 3,171 individuals 13-14 years after high school graduation and found that when educational

attainment is held constant, students initially enrolling in a 2-year vs. 4-year colleges are not significantly disadvantaged in occupational and economic attainments (Whitaker & Pascarella, 1994).

Although there are exceptions within the community college environment, residential living typically is an experience of the 4-year or university campus. The influences of residential versus the commuter students' experience parallels that of attending a 4-year or 2-year institution. Thompson (1993) examined influence of on-campus residence as compared with off-campus residence of first-year students. Findings from 5,414 students revealed that progress and retention were significantly higher for on-campus students regardless of race, gender, or admission type (Thompson, 1993).

Pascarella (1985b) proposed a causal model to examine the impact of resident living on student development. He tested the model with 4,191 college students. Results indicated that the influence of on-campus living on intellectual and social self-concept is indirect and mediated through interactions with faculty and peers (Pascarella, 1985b).

Looking at issues regarding the commuter experience, Pascarella and associates (Pascarella et al., 1993) tested the hypothesis that living on campus fostered cognitive growth. They estimated relative first-year gains in reading comprehension, mathematical reasoning and critical thinking of residents and commuter first-year college students at a large urban university. Controlling for precollege cognitive level, academic motivation, age, work responsibility, and extent of enrollment, resident students had

significantly larger first-year gains in critical thinking than did commuters. The differences between resident and commuter on reading and mathematics gains were small and nonsignificant. These findings suggest that the cognitive impact of residential living is selective rather than global. The gains in critical thinking, rather than mathematics and reading, indicate that residential living may be most influential in fostering cognitive growth in areas that are not linked to specific course of curricular experiences. The study suggested general cognitive growth during college is fostered not only by coursework and academic involvement but also by social and intellectual interaction with peers and faculty.

Studies Addressing Tinto's Variables of Attrition/Retention

Tinto (1993) theorized that a student enters higher education with varying patterns of personal, familial, and academic characteristics. These personal dispositions are represented by what Tinto refers to as a student's intention and commitment. A student's intentions and commitments are shaped through individual experience within the institution. How these interactions reflect the individual's experience will determine if the student persists in college. Tinto identified four clusters of student experience that will shape the outcome of college persistence: adjustment, difficulty, incongruence, and isolation. Obligations and finances are forces outside the institution that affect the student's decision to persist or drop out of the educational system.

Intention and Commitment

Tinto (1993) recognized that a student's willingness to work toward the attainment of his or her goal is a significant part of the process of persistence in higher

education. Tinto views an individual's intentions regarding participation in higher education as an important indicator of the probability of degree completion. A number of studies have found that students who had definite or advanced degree aspirations were more likely to persist than students who had lower or undetermined degree goals (Astin, 1975, Lenning, Beal, & Sauer, 1980; MacMillian & Kester, 1973; Tinto, 1975).

The impact of intentions can be seen in a study conducted by Waggener and Smith (1993) at Southeastern Louisiana University at Hammond with 2,262 new and transfer freshman applicants who attended orientation in 1989. A Supplementary Enrollment Information instrument developed locally by the institution was used to collect data. Family encouragement, the need for writing skills, belief in self, the goal to obtain a degree, amount of commitment, and living arrangements were important variables in deciding to enroll the following fall. The two factors that were important at both benchmarks were the goal to obtain a degree and the firm or extra commitment to that goal (Waggener & Smith, 1993).

Individual commitments take the forms of goal and institutional commitments. Goal commitment addresses an individual's commitment to personal and occupational goals. Academic boredom sets in for undecided students because "learning is not quite as relevant to those who do not have a goal" (Noel, 1985, p. 11). Institutional commitment describes an individual's commitment to the institution in which they attend. Tinto (1993) stated that the greater the commitment, in either case, the greater the opportunity of institutional persistence.

Students with identified career goals and a sense of purpose are more likely to persist in college (Boe & Jolicoeur, 1989, Gordon, 1989; Kester 1980; Raimst, 1981). Daniels (1990) analyzed the results of an Entering Student Survey administered to 3,590 new students at Brookdale Community College. The survey gathered information from students on their goals and expectations and reached a 62% response rate. Subsequent tracking of students revealed that retention was higher for students who planned on graduation and students who planned on transferring than for students without plans.

Lenning, Beal, and Sauer (1980) commented that a commitment to college, clear-cut college and career goals, and certainty of goals were all important factors related to persistence. In 2-year colleges, goal commitment seems to have a stronger effect on retention than does institutional commitment (Chapman & Pascarella, 1983; Pascarella & Chapman, 1983a).

Mohammadi (1994) found the most significant predictors of community college student retention, in order of importance, were student goals, hours enrolled per semester, number of credit hours completed, semester grade point average, and overall GPA. Mohammadi also found that 40% of the fall 1988 cohort who left after 1 year had no intention of completing a degree or certificate program.

There is some indication that the nature of commitment may vary based upon gender. A study that assessed gender differences in student satisfaction with college was conducted to understand further what contributes to student persistence and student outcomes. Bean and Vesper (1994) gathered data from 494 first- and second-

year honors students at a large research university. Confidence in being a student and having attractive courses were important for both female and male students, but only men identified choice of major and occupational certainty as the most significant factors.

There is also evidence that possessing a goal may not be as critical a factor. A study to determine success in retaining students through the successful completion of their educational goals was conducted at Northwestern Michigan College. Retention rates by student goals were 72% for students whose goal was to advance in a job, 81.8% for those seeking to get a new job, 84.2% for those seeking transfer, and 85.6% for those reporting no goals (Shreve, 1995).

The nature of an institution's structure may influence a student's goal formation process after they are admitted into the school. A study by McCormick (1990) explored the effect of beginning postsecondary education in a 2-year college versus a 4-year college, after controlling for background characteristics (gender, race/ethnicity, socioeconomic status, and measured ability), initial education goal commitments, and secondary and postsecondary program and performance. Data were drawn from the senior cohort of the "High School and Beyond" database. The study involved a sample of 2, 894 students. Results indicate that beginning postsecondary education in a 2-year college increases the likelihood of a downward adjustment in expectations and that this effect is most pronounced among those initially anticipating graduate study (McCormick, 1990).

Rugg (1983) suggested that there is a second category of students called attainners that needs to be distinguished from dropouts. Attainners are students who discontinue

their enrollment before graduation but after achieving their personal goals for college study. Many students begin college with established goals which fall short of completing a degree. From these students' point of view, the act of withdrawal does not necessarily carry the label of personal failure that professionals in higher education normally associate with it (Raimst, 1981). Tinto (1985) stated that the term dropout should be applied only to those forms of departure involving students who did not reasonably complete what they intended to achieve upon college entry.

Other studies indicate that students will meet their own established goals, while being viewed by the institutions as a dropout. Moore's (1995) study at San Juan College indicated that 54% of students who left after one semester reported they had achieved their educational goals. In the spring of 1995 Westchester Community College in New York surveyed all 1,208 students who attended for the first time in fall 1993 but did not return the following spring semester. With a response rate of 20%, 14.1 % indicated that they had not intended to return for spring semester when they enrolled--that they had achieved their goals (Lee, 1996). Yet, Cohen and Brawer (1982) argued that the study of student-stated goals is unreliable because students generally are not able to express accurately their reasons for the choices they make.

With the exception of a few students who leave due to externally imposed circumstances, student explanations for withdrawal are related to dissatisfaction with the benefits of the academic or social life of the institution (Raimst, 1981). Furthermore, there is evidence to indicate that institutional characteristics have as much or more impact on college withdrawal than do student characteristics. Students are

more likely to leave because of dissatisfying experiences with the institution they are attending (Noel, 1985). Tinto (1987) concluded that student retention is at least as much a function of institutional behavior as it is of student behavior.

Adjustment. There are two distinct sources of difficulty in making the transition to college. One may be the inability of individuals to separate themselves from past forms of association. The other difficulty arises from an individual's need to adjust to the new and often more challenging social and intellectual demands of higher education (Tinto, 1993). A lack of understanding of the nature of the college experience hinders persistence. Noel (1985) wrote that many first-generation college students do not benefit from family members' past experiences. Therefore, when confronted with the realities and demands of college living, they may feel the pressure to withdraw.

Working from a foundation built by Tinto (1975), Pascarella, Terenzini, and Wolfe (1986) tested the principles of Tinto's model of the persistence/withdrawal process using a precollege orientation program as the experimental intervention. They found that the orientation experience had an impact on freshman persistence largely by facilitating a student's initial ability to cope with a new set of social challenges in an unfamiliar environment. In making their conclusion, Pascarella, Terenzini, and Wolfe stated that developing initially successful integration into the social system of the institution was the factor which most directly influenced commitment to the institution and persistence.

Early research indicates that attrition is heaviest during and at the end of the freshman year (Rootman, 1972). Research consistently indicates that the freshman year

is the stage when the greatest number of students are at risk of dropping out (Bean, 1980, Fetters, 1977; Dunphy, Miller, Woodruff, & Nelson, 1987). Porter (1990) found that the greatest enrollment loss in independent colleges and universities occurred during the first year and after the eighth semester. At least one-half of all students who drop out of college will do so during their freshman year (Noel, 1985), and many of these students will leave during the first 6 to 8 weeks of their initial semester (Blanc, Debuhr, & Martin, 1983). Others have further narrowed the freshman's most critical transition time, a period when the majority of students who drop out make the decision to do so, to the first two to six weeks of school (Zarvell et al., 1991; Levitz & Noel, 1989; Gardner, 1986).

Another area in which researchers have shown interest is in the students' own assessment of their experiences while enrolled in college, their reasons for leaving the institution, and their plans for the future after leaving college. Nelson, Scott, and Bryan (1984) found that by the eighth week of the term students were able to state plans about their next term and "that students who will not persist can be identified by the middle of their first semester" (p. 56).

Difficulty. Persistence in college requires more than adjustment. Minimum standards of academic performance must be attained. However, prior performance and measures of ability are not very highly correlated with departure (Tinto, 1993). Limited intentions and/or weak commitments may be manifested in poor academic performance.

Astin (1972, 1985) found that persistence was positively correlated with academic performance in high school and college admission test scores. While these

measures could not accurately predict whether a given student would drop out, Astin noted that high school grades and ability test scores were by far the most important available predictors of persistence for students at 4-year colleges and universities.

Pascarella (1980) found that a student's high school grade point average is the pre-enrollment characteristic most highly correlated with college grade point average. According to Astin (1993), the two most important predictors of students' grades in the 1985-1989 study were high school grade point average and SAT verbal scores.

Research findings comparing dropouts and persisters were in agreement regarding academic ability as a key variable (Bell, 1984; Gorter, 1978; Reinertson, 1986; Webb, 1989). Dropouts scored lower on standardized test designed to measure ability, such as ACT, than did persisters (Cohen & Brawer, 1982; DiCarlo, 1980). Moline (1987) found admission test scores and high school grades to be two strong predictors of retention during the 1970s and 1980s. Nelson, Scott, and Breyan (1984) and Zarvel and others (1991) also found precollege academic achievement and aptitude variables as useful predictors of persistence.

Studies by Astin, Korn, and Green (1987) showed that students with the highest test scores are six times more likely to earn a bachelor's degree in 4 years than those with the lowest scores. Students with the highest scores and grade point averages are 15 times more likely to earn a bachelor's degree in 4 years than those with the lowest scores.

Wall (1996) conducted a four-semester study at Atlantic Community College to determine which were the factors that affected retention. Academic success, measured

by previous semester grade point average, was found to be a strong determinant of retention for all semesters and for long-term attendance and graduation. Students who tested into developmental courses on the basic skills test and who completed a required developmental course during their first semester persisted at the same or a higher rate as students who tested at college level, while developmental students who did not complete a developmental course in their first semester had significantly lower retention rates (Wall, 1996).

Matonak's (1987) study of student retention on an academically disadvantaged community college student population is supportive of the constructs in Tinto's theory. The positive effects of academic integration on retention was consistent with the model, and with results of previous studies on commuter students (Fox, 1986; Nora, 1987). The negative influence of social integration on retention was inconsistent with the hypothesized model, yet it was consistent with previous research on similar populations (Fox, 1986). Although initial commitments accounted for a significant portion of the variance in academic integration and social integration, the results did not substantiate the hypothesized positive relationship between initial commitments and retention.

Incongruence and isolation. Tinto (1993) described incongruence as a lack of institutional fit. It refers to the condition where the student perceives him/herself as being at odds with the institution. The mismatch may be between the abilities, skills, and interests of the students and the demands placed upon the individual by the academic system. Typically, incongruence is manifested in the student's judgment that

the school's intellectual or social climate is unsuited or irrelevant, or even contrary, to his or her own preferences (Tinto, 1993). Incongruence may be the result of poor decision making in college choice. Cope and Hannah (1975) indicated that poor college choice is the cause of at least 20% of college transfers.

In exploring the relationship between student incongruence and satisfaction, Lenning, Beal, and Saur (1980) reported that persistence may be related more to willingness and ability to endure dissatisfaction than to the dissatisfaction itself. Citing dissonance theory, they speculated that "students with strong perceptions of personal needs that are not being met will be more likely to try to remedy the discrepancy (i.e., by dropping out) than those who consider their unmet needs to be less serious" (p. 51).

Tinto (1993) stated that individual isolation, the absence of sufficient contact between the student and other members of the social and academic communities, leads to departure from the institution. Tinto (1982) noted that the more time faculty gave to their students, and students to each other, the more likely were students to complete their education. He pointed out that such contacts appeared to be essential components in the process of social and intellectual development and concluded that institutions should encourage those contacts whenever and wherever possible. Astin (1977) supported the premise that student and faculty interaction have a stronger relationship to student satisfaction with the college experience than any other involvement, variable, or, indeed, any other student or institutional characteristic. Pascarella and Chapman (1983b), using a large multi-institutional sample of 2,326 college students, observed that social and academic integration, while not directly influencing persistence, had

significant indirect effects on persistence. This influence on persistence operated through institutional commitment and goal commitment.

Tinto (1975) stressed that interaction with faculty not only increased social integration and institutional commitment but also increased the individual's academic integration. Pascarella and Terenzini (1978) found that only two of the six types of interactions studied were significantly related to academic achievement: discussion of intellectual matters and discussion of career concerns with faculty. Astin and Panos (1969) found that after controlling for pre-enrollment characteristics, students' familiarity with their instructors was related to significant increases in academic achievement. Furthermore, a study by Beal and Noel (1980) established that a caring attitude of faculty and staff is the most potent retention force on campus.

The impact of interaction can vary with different populations. Bean and Vesper (1994) found that faculty contact was not significant to female or male honor students when surveyed regarding student satisfaction with college. Furthermore, results indicated that contact with advisors, having friends, and living on campus were significantly related to satisfaction for females but not for male honors students at a large research university (Bean & Vesper, 1994).

Although Tinto's model of student retention postulates an approximate parity between social and academic integration, Munro (1981) found the effect size for the influence of academic integration on persistence to be moderately strong. Munro studied 6,018 first-time, full-time, 4-year college entrants. She observed significant direct and indirect effects for academic integration, goal commitment, and high school

average on persistence in college. Social integration, however, had no significant direct or indirect effect on persistence.

For commuter colleges, the findings for academic integration and social integration have been mixed. In a study of commuter students attending an urban university, direct and indirect effects of academic integration on persistence were observed by Pascarella, Duby, and Iverson (1983). Contradicting Tinto's formulation, social integration was found to have a negative impact on persistence. An increase in social integration represented an increased risk for withdrawal. In other studies by Pascarella and Chapman (1983a), Pascarella and Wolf (1985), and Tinto (1987, 1993), academic integration appears to have greater effects on attrition than does social integration, especially in commuter institutions. Academic integration was found to influence significantly social integration and not to influence persistence among academically disadvantaged students at a 2-year commuter institution (Fox, 1986)

When looking specifically at community colleges, results from Napoli's (1996) meta-analysis of community college literature indicated that both academic integration and social integration play important roles in the decision to persist in college. Pascarella, Smart, and Etherington (1986) found both social and academic integration to have direct and indirect effects on long-term (9-year) persistence and graduation among 2-year community college students. A study by Bers and Smith (1991) found both integration measures significantly related to persistence in 2-year community college students. Their study underscored social integration making a larger contribution in discriminating persisters from nonpersisters, than does academic integration, at the

community college. Work by Napoli (1996) further showed that the impact of social integration is greatest for term-to-term persistence and diminishes over time.

The findings regarding social integration are not consistent. Work by Mulligan and Hennessy (1990) showed that direct and indirect effects have been observed for academic integration, but not for social integration, among students attending a 2-year community college. A study by Halpin (1990) failed to detect any effect for social integration among 2-year community college students.

Two interventions designed to address academic and social isolation in the classroom are Learning Communities and Freshman Interest Groups (FIGs). A qualitative case study of FIGs was conducted by Tinto and Goodsell (1993) at a large public, research university. In this study, freshmen enrolled in specific thematically linked courses during their first semester. Results showed that FIGs allowed students to interact repeatedly with a consistent set of peers across their classes. This, in turn, enabled students to form a social network in which other academic support mechanisms could begin to operate. Tinto and Goodsell indicated that FIGs are a potentially powerful way of affecting students' first year college experiences.

Similar to FIGs, learning communities at a community college consist of groups of students taking two or more classes together. Learning communities create the opportunity for students to provide each other with social and academic support while professors integrate class content. Tinto and Love (1995) found that when compared to traditional students, learning community students' perception of classes, other students, faculty, counselors, campus climate, and their own involvement were generally more

positive. Learning community students earned more credits and had higher grade point averages than traditional students, yet learning community students had only a slightly higher persistence rate than the comparison students (77.7% versus 75.9%). In general, learning community students indicated that group work and peer collaboration was easier and more fun than traditional methods.

External Obligations/Family and Financial

Tinto (1993) stated that every student is subject to the effects of external forces upon his or her participation in college. The two external forces that stand out in shaping persistence are obligations and finances. The first refers to the responsibilities individuals have in regard to their associations with groups of communities external to school. The latter refers to one's ability to fund his or her college attendance. External factors have been found to have a greater influence on the dropout decision for students at commuter institutions than social integration (Bean & Metzner, 1985; Tinto, 1987, 1993).

Allen's (1994) study of student withdrawal behavior at Angelo State University in Texas highlighted the role of family. The study focused upon 343 respondents of 823 first-time freshmen. Results found three characteristics distinguished persisters from dropouts and from transfer students: (a) greater encouragement from family, (b) better academic performance, and (c) greater commitment to the institution. Encouragement from family was the most significant of these factors (Allen, 1994).

When turning to educational funding issues, early studies of the importance of financial factors show a potential relationship to persistence. Summerskill's (1962)

review of the literature found that in 16 out of 21 studies financial reasons were ranked among the top three most important factors in attrition.

Tinto (1982) found that much of the impact of finances on a student's academic decisions occurred at the point of entry into higher education. Financial issues influenced decisions of whether or not to attend college. Thereafter, financial impact helped to mold choice about specific institutions of initial entry. Cope and Hannah (1975) found similar results and reported that the lack of finances was more of a barrier to starting college than it was to finishing college. Tinto (1993) also observed that when students' experiences were positive, they were more likely to accept greater financial burdens in order to continue attendance than when experiences were unsatisfactory.

Earl (1989) analyzed student financial aid in terms of its effects on admissions policies, attrition and retention rates, stop-out rates, transfer rates, and graduation rates. His source was literature related to student financial aid and published between 1970 and 1981. He discovered that most studies using a national or statewide base find that financial aid significantly affects enrollment in American colleges and universities. Financial aid has been found to be a significant factor in the recruitment and retention process, and it also helps students decide whether to attend a public or private institution (Earl, 1989).

Stampen and Cabrera (1988) investigated three basic student financial aid issues in 4-year colleges: the targeting of overall aid, aid packaging for different recipient groups, and financial aid's role in motivating persistence. Their findings show that aid is distributed mainly to low income students, compensates for low-income disadvantages,

and encourages students' persistence. From Porter's (1990) review of data from private 4-year institutions taken from the "High School and Beyond" study, he determined that students who received grants in their first year of study were more likely to remain enrolled than students without grants.

Cabrera (1990) conducted a study using a national sample of 1,375 college students attending public 4-year institutions. They tested a hypothesis concerning economic and noneconomic variables on college persistence. Findings indicated financial variables moderate the effect of goal commitment on persistence. In another study also by Cabrera (1992), funding at commuter colleges was studied. A survey of 466 students in a large, urban commuter college investigated the relationship of student finances to academic persistence. Results suggested that financial aid (a) equalizes opportunities for students, thus decreasing attractiveness of alternatives, (b) facilitates academic and social integration, and (c) increases student commitment to the institution.

Work

Working while attending school is inevitable for many students in America's higher education system. Dey, Astin, and Korn, (1991) reported that over 20% of all entering first-year students indicated that the probability was very good that they would have to find employment outside their school. National data from the Cooperative Institutional Research Program (Astin, 1993) showed that 36% of all first-year students entering American colleges and universities in 1990 reported that they would have to find employment to assist in paying for their college expenses.

Being employed during the school year generates risks. Astin (1972) found that students had less of a chance of staying in college if they were employed during the school year. This variable was the fourth most important predictor of attrition among students at 4-year colleges and universities. Research is reasonably consistent that employment off campus (typically measured in number of hours employed per week) has a negative influence on both year-to-year persistence in college and completion of a bachelor's degree (Anderson 1981; Astin, 1982; Ehrenberg & Sherman, 1987; Staman, 1980).

The impact on retention and educational attainment of working on campus appears to be just the opposite of off-campus employment. Research by Pascarella and Terenzini (1991), Anderson (1981), Astin (1982), and Velez (1985) indicated that part-time employment on campus positively influences both persistence and degree completion, even after controls are made for such factors as academic aptitude, educational aspirations, high school achievement, and family socioeconomic origins.

Furthermore, other researcher have found that it is the amount of time per week spent working that is significantly related to attrition. Lenning, Beal, and Sauer (1980) found that part-time employment was positively correlated with persistence, especially when the job was under 25 hours per week, was on campus, the student started working as a freshman, and the student received little or no support through grants or loans. When the job exceeded 25 hours per week, it negatively impacted persistence. It has been speculated by Lenning, Beal, and Sauer that part-time on-campus jobs promoted retention by providing additional involvement in campus life.

Pascarella et al. (1994a) studied the impact of on-campus and off-campus work on first-year student cognitive outcomes. With controls made for precollege cognitive level and other relevant influences, amount of on- and off-campus work had little negative impact on first-year students' reading comprehension, mathematics achievement, or critical thinking. In fact, there was no significant difference on any of the three cognitive outcomes among students who worked on campus, students who worked off campus, and students who did not work during the first year.

Work and/or family obligations typically limit a student's academic load to part-time or less. When observed by itself, a student's full-time/part-time status becomes a significant attrition variable. Moore (1995) and Windham (1994) found that full-time attendance at the community college is the most prevalent characteristic of persisters. The most salient characteristic among studies of nonpersisters is part-time attendance (Feldman, 1993; Price, 1993).

In a study by Breindel (1997), the number of units carried, as opposed to gender, age or ethnicity, was the principal predictor of credit student persistence. For new credit students who enrolled in 12 units or more, 67% persisted to the subsequent fall semester. This compares to 46% of those carrying 6 to 11.9 units and 27% of those carrying 5.9 or fewer units (Breindel, 1997).

Moore (1995) conducted a study at San Juan College that took into account several definitions of persistence, including re-enrollment in the subsequent term, re-enrollment the following fall semester, and persistence in relation to indicators of student educational goals such as full-time or degree-seeking status. In 1991 and 1992,

fall to fall persistence rates for part-time, degree-seeking students were 42% and 35%, respectively, and 59% and 46% for full-time, degree-seeking students. Semester to semester persistence rates for fall 1993 were 79% for full-time students and 45% for part-time students, with higher fall to spring persistence rates than spring to fall rates. In general, all full-time students persisted at a higher rate than part-time students (Moore, 1995).

In the spring of 1995 Westchester Community College in New York surveyed all students who attended for the first time in fall 1993 but did not return the following spring semester. While only 56.2% of the first-time students in 1993 attended part-time, 75% of the 1,208 students who did not return had attended part-time (Lee, 1996).

College Orientation Course Studies

Tinto (1982) stressed an emphasis for programs designed to promote student-faculty interaction. Concluding his remarks on general retention strategies, Tinto noted that successful retention programs were most frequently longitudinal in character, were also always integrally tied to the admissions process, and their implementation generally involved a wide range of institutional characters. College orientation courses, taken the first term of entry, fit Tinto's criteria for successful retention programming.

Approximately two-thirds of all 2-year and 4-year colleges and universities offer some type of new student seminar. The primary goal of almost 70% of these courses is providing students with an extended orientation to the institution, to themselves as learners, to essential academic skills, and to the purpose of higher education (Barefoot & Fidler, 1996). Gordon (1989) stated that 40% of the institutions that responded to a

survey from the National Orientation Directors Association utilized a freshman course or seminar to assist student adjustment to college and to enhance student persistence. Of the 1,010 survey responses to the 1994 National Survey of Freshman Seminar Programs by Barefoot and Fidler (1996), 350 responses were from community colleges. Two hundred-twenty (60%) of the responding community colleges indicated that they offered a "first-year" or "new student" course.

Rice and Devore (1992) found extended orientation courses equally common at 2- and 4-year colleges but different in administrative structures and content emphases. From a national study, 2-year college courses were found to have larger class sizes, shorter duration, and less varied content and were less likely to be required or to introduce an academic discipline.

In a study by Fidler (1991), data were collected and analyzed indicating that students who participated in the freshman seminar course exhibited higher sophomore retention rates than nonparticipants for 14 consecutive years. Furthermore, seminar participants were also more likely to persist to graduation (Shanley & Witten, 1990). Similar retention-enhancing effects of the freshman seminar have been found for "high-risk" students who did not meet regular admission requirements (Fidler & Hunter, 1989). Fidler (1985) reported freshman-to-sophomore retention rates averaged 81% for University 101 participants in contrast to 75.8% for nonparticipants.

Keenan and Gabovitch (1995) conducted a longitudinal study to assess the effect of a 1-credit, 8-week freshman seminar on student development and retention. Outcomes measured were knowledge of college resources and services, utilization of

academic support services, increases in self-assessed learning skills, increases in students' career maturity, and retention of students from the first to second semester of their freshman year. For 4 years beginning in spring 1992, students in the course and in a control group completed a questionnaire during the first and last weeks of the semester. Results suggested positive effects of seminar participation on all of the measures. Students in the seminar scored consistently higher than students in the control group regarding student development and integration into the campus culture. Students in the seminar were also far more likely to use tutoring and other academic support services than control students (Keenan & Gabovitch, 1995).

Hoff (1994) led a research group in a study that examined the effects of a Dalton Junior College student success course. All students were in college for the first time. The sample included 405 class participants and 500 control participants. Among the findings were that at the end of their first year, class students were progressing more quickly through their program and that class students returned at significantly higher rates both after the first quarter and after the first year.

A study was conducted at Sacramento City College to determine the effects of enrolling in a first-semester student success course on academic performance and persistence. Matched pairs of students, one who took the semester-long course and one who did not, were compared in terms of number of college credit hours completed, grade point average, and dropout rate. From two equal-sized pools totaling over 250 students, 40 pairs of students were randomly matched on reading levels, writing levels, and number of hours employed. Over the seven semesters of the study, the dropout

rate of the treatment group was half that of the control group. Students in the treatment group earned a grade of C or better in four times as many math courses. When the total number of college credits earned was examined, the treatment group completed 326% more units than the control group. After seven semesters, the GPAs of the two groups were almost identical (Stupka, 1993).

A study of the Harrisburg Area Community College Master Student course was conducted to track academic achievement, including number of semesters enrolled and total credits carried and earned for 115 students that took the course in 1992. The results indicated that the group had a mean cumulative grade point average of 2.21 at the end of summer 1993, compared to a college-wide GPA of 2.64. The sample was not representative of the general student population, but researchers indicated that the course did help student performance, at least on a short-term basis (Lum & Signor, 1994).

A study at DeKalb College in Clarkston, Georgia, was conducted to determine whether the needs of students were satisfied by the orientation classes and if there were differences between the evaluation of freshmen in the 5-week classes as compared to those in the 10-week classes. Approximately 1,300 freshmen evaluated the classes at the final class session. In general, student evaluations of the 5-week sections were more positive than evaluations of the 10-week sections. In the 5-week course 91.5% of the freshmen felt that the program planning session was essential or very important for the beginning freshmen, while 71.5% of the freshmen in the 10-week classes felt the same. Vocational/career planning were considered essential or very important by 70.8% of the

5-week sample and 56.4% of the 10-week sample. Study skills sessions appeared least effective (Ozaki, 1994).

A study by Sloan (1991) intended to analyze whether a college orientation course at Broward Community College was effective in building institutional commitment, defined as re-enrollment after 1 year. Using regression analysis, the orientation course was significant as the second best predictor of first-term grade point averages, while total credit hours paid for the first semester were the best predictors. The overall findings indicated that the combination of factors (gender, race/ethnic group, degree program, total credits paid for, college preparatory/college level status, and enrollment in the orientation course) is more significant in explaining mean differences in first-term grade point average than in explaining significant difference in re-enrollment or graduation rates. Findings indicated a strong relationship between enrollment in the orientation course and 1-year re-enrollment in the college for part-time A.A. degree-seeking students (Sloan, 1991)

Results of a study by McIntyre (1993) did not support the hypothesis that the college orientation course has a significant effect on persistence or success as defined as higher GPA or enrollment status. In his study, students who had not declared a major were required to enroll and participate in the course.

After reviewing the research on the freshman orientation class in their synthesis of more than 2,500 studies on how college programs and experiences affect student development, Pascarella and Terenzini (1991) concluded, "The weight of the evidence suggests that a first-semester freshman seminar . . . is positively linked with both

freshman-year persistence and degree completion. The positive link persists even when academic aptitude and secondary school achievement are taken into account" (pp. 419-420).

Adjustment and Difficulty

College orientation classes in the community college have been found to supply students with information essential to their academic socialization and adjustment to college. Coll and VonSeggern (1991) wrote that college orientation classes facilitate adjustment to college by providing (a) descriptions of college program offerings, (b) the college's expectations for students, (c) information about assistance and services for examining interests, values, and abilities, (d) encouragement to establish working relationships with faculty, (e) information about services that help with adjustment to college, and (f) financial aid information.

Students entering college may lack confidence in their ability to be successful students. Self-appraisal can be a critical factor in student adjustment. Taylor (1988) evaluated the effect of an extended orientation course on community college students' self-appraisal of problem-solving behaviors. It was hypothesized that students who completed the class would see themselves as more effective problem solvers, assess their academic skills at a higher level, be more familiar with and use campus resources at a higher rate, and perform better academically than would control subjects. All subjects completed the Problem-Solving Inventory, an Academic Skills Evaluation, and the Campus Resource Utilization Checklist in a pre-/posttest quasi-experimental design. Differences in academic performance were assessed by comparing GPA and persistence

rates for two quarters. Analysis indicated that subjects reported a significant increase in academic self-confidence but not problem-solving appraisal. Treatment groups were more familiar with 82% of the campus resources than were control but did not use services at a higher rate. When educational background was covaried, treatment subjects achieved significantly higher GPAs for the first quarter; and there were no significant differences in second quarter GPA or retention rates (Taylor, 1988).

In a study by Davis-Underwood and Lee (1994), the results of the analysis of variance indicated that students who participated in the freshman orientation course had a significantly higher mean freshman year GPA than nonparticipants. Seminar participants earned an average GPA of 2.63, while nonparticipants earned an average GPA of 2.35. Fidler and Hunter (1989), Stupka (1986), and Wilkie and Kuckuck (1989) found GPAs of course participants to be significantly higher than those achieved by matched control groups of nonparticipants.

Fidler (1985) found that freshmen who participated in University 101 had a higher probability of returning for the sophomore year, in spite of a greater percentage of higher risk students than nonparticipants. Research indicates that participation in college orientation classes raises the academic performance of low-achieving students (as identified by below-average entrance test scores and high school rank) relative to that of students with more qualified admission characteristics (Fidler, 1991). Research further suggests that participation in a first-year extended orientation class has particularly dramatic effects on academically at-risk students who are disproportionately represented in community colleges (Roueche & Roueche, 1993).

The results of the study by Blackhust (1994) are consistent with research regarding academic achievement and freshman orientation courses. Such research suggests that freshman orientation courses increase the academic performance of low-achieving students relative to other students. While not tested directly by this study, this hypothesis is supported by the finding that students with relatively low grade point averages found the freshman orientation course the most useful in helping them succeed academically. Analysis of data by Craig (1994) indicated a significant relationship between participation in the course and retention and academic performance for all freshmen, whether they were considered to be at risk or not. Of the at-risk students, nearly four out of five who participated in the course were still enrolled in college 1 year after their initial freshman semester.

A study examined the impact of a 1-credit study skills course on the academic achievement and retention of second-semester freshman probationary students at a state-supported university with a student population of over 13,000 in western Pennsylvania. The study compared academic performance of the treatment and nontreatment groups as measured by grade point averages, academic hours attempted, and academic hours earned during the semester the treatment occurred as well as subsequent semesters of study. The population had a grade point average below 1.5 on a 4.0 scale at the end of their first semester at the university. Forty-one students in 1985 and 54 in 1986 of the invited students participated in the class. The control group was identified as those probationary students not choosing to participate in the study. At the conclusion of the spring semester the experimental group in each year of the

study earned a significantly higher grade point average than did the control group. However these GPAs for all groups were still lower than a C average. Both experimental groups earned significantly more academic hours during the spring semester than did the comparison control group. The experimental group had significantly higher grade point averages than did students in the control group 2 years following the 1985 intervention. There were no statistically significant differences between the two groups in regard to hours attempted and hours earned. One year following the intervention, 14% more of the students in the treatment group than in the nontreatment group were still enrolled at the university. This difference also was evident 2 years following intervention, when 9% more of the students in the treatment group were still enrolled at the university than were nontreatment (Lipsky & Ender, 1990). However, an initial study of the freshmen seminar at the University of North Carolina (Maisto, Davis, Keyes, & Tammi, 1987) found no significant differences between seminar participants and nonparticipants on measures of academic success and retention.

Addressing special populations, a study examined the effectiveness of a freshman orientation course for learning-disabled (LD) and nonlearning-disabled (NLD) students. In a longitudinal records review study, the retention or graduation rates and grade point averages of 680 LD and NLD students who did and did not complete a freshman seminar were analyzed. Results suggested that students who completed the seminar graduated at a higher rate than control students and that LD students graduated at a higher rate than NLD students. Learning-disabled students who completed the

freshman seminar experienced the highest graduation rate, followed by NLD students who participated in the seminar, and then students who did not take the seminar and were NLD. The lowest graduation rate was for LD students who did not take the seminar. Grade point averages were generally not significantly different between the LD and NLD groups in relation to participation in the freshman orientation course (Green, 1995).

Incongruence and Isolation

During 1987-1988, Manor Junior College developed a semester-long freshman orientation course designed to help students understand the college system, to strengthen students' identification with their vocational program and career choice, and to improve students' academic competencies and confidence in their ability to achieve academic success. Students met in groups for 2 hours per week to discuss a variety of topics. Students were also given weekly writing assignments related to their vocational programs and career goals. Student participants reported having difficulty maintaining close ties with the freshman orientation course instructor the semester following the course. They also expressed dissatisfaction with the amount of work required by the noncredit seminar (Suffet, 1988).

Another study was designed to gather information about students' informal faculty contacts and their participation in extracurricular activities. The results of the nine-item paper-and-pencil questionnaire showed that seminar participants engaged in significantly more informal faculty contacts than nonparticipants. Seminar participants also reported being engaged in significantly more extracurricular activities than

nonparticipants. No significant gender effects were found (Davis-Underwood & Lee, 1994).

Summary

In summary, when looking at the variables most often associated with retention--gender, age, and race--it appears there is inconclusive evidence to determine if men and women differ in persistence patterns. Furthermore, attrition in nontraditional-age students is impacted more significantly by factors external to education, and characteristics of student background and academic ability are greater predictors of persistence than race. In addition, students attending 2-year institutions are more likely to drop out of school than those attending 4-year institutions. The difference in dropout rates among these students more typically arises from institutional conditions than from the academic ability of the students attracted to either type of institution. The high rate of dropping out at the early stages of college entry points to the role of college adjustment and goal commitment. First-year college orientation classes are related to freshman year persistence and to degree completion.

CHAPTER 3 METHODOLOGY

Chapter Organization

In this chapter the study's design, research questions, participants, research and data collection procedures, and analysis are described. The purpose of this study was to explore whether there is a significant relationship between taking a community college orientation course during the first term and the retention, persistence, and time to degree completion of academically prepared students.

Research Design

Inferential statistics were used to describe the effect of an orientation class taken during the first term in college on retention, course withdrawals, grade point average, course repetitions, and number of credit hours accumulated before graduation. The study retrospectively covers a 4-year period. Because random assignment of students to a treatment and nontreatment group was not possible, an ex post facto design was used. The ex post facto model is effective in evaluating the effects of a treatment not originally designed for research purposes (Huck, Cormier, & Bounds, 1974) and to study possible causes after they may have exerted their effect upon other variables (Borg & Gall, 1989).

The study was longitudinal in structure, assessing historical data after the first semester, and at the end of the first, second, third, and fourth year of the initial treatment. Legislative action taken in the fall of 1995 brought changes to curriculum and withdrawal

policy in the state of Florida. To remove the influence of these changes upon the study, the period being observed is 1991-1995.

Research Questions

This study examined the following research questions:

1. Is there a difference between students who have taken a college orientation class and those who have not taken a college orientation class (in their first term) in retention after 1 year, 2 years, 3 years, and 4 years?
2. Is there a difference between students who have taken a college orientation class and those who have not taken a college orientation class (in their first term) in number of course withdrawals after 1 year, 2 years, 3 years, and 4 years?
3. Is there a difference between students who have taken a college orientation class and those who have not taken a college orientation class (in their first term) in GPA after 1 year, 2 years, 3 years, and 4 years?
4. Is there a difference between students who have taken a college orientation class and those who have not taken a college orientation class (in their first term) in total number of courses repeated after 1 year, 2 years, 3 years, and 4 years?
5. Is there a difference between students who have taken a college orientation class and those who have not taken a college orientation class (in their first term) in total number of credit hours at time of graduation?
6. Do age, gender, and race interact with taking a college orientation course (in their first term) to affect retention, course withdrawal, GPA, courses repeated, and number of credit hours taken at time of graduation?

Participants

The participants in this investigation consisted of male and female students from Miami-Dade Community College, Okaloosa-Walton Community College, Santa Fe Community College, and Tallahassee Community College. Miami-Dade Community College, located in a large urban community in the southern part of the state, has an unduplicated Associate in Arts Degree Program headcount of 25,693 students (Department of Education, Division of Community Colleges, 1997). Okaloosa-Walton Community College, located in a small coastal community in the northwestern part of the state, has an unduplicated Associate in Arts Degree Program headcount of 4,023 students (Department of Education, Division of Community Colleges, 1997). Santa Fe Community College, located in a medium-sized urban community in the north-central part of the state, has an unduplicated Associate in Arts Degree Program headcount of 11,526 students (Department of Education, Division of Community Colleges, 1997). Tallahassee Community College, located at the state capitol in the north-central part of the state, has an unduplicated Associate in Arts Degree Program headcount of 7,656 students (Department of Education, Division of Community Colleges, 1997). These four Florida institutions were chosen because they have similar general academic graduation requirements, offer similar college orientation classes, and vary in institutional size and location.

In order to be selected into the study, participants had to be first time in college for the academic term starting fall of 1991, had completed at least the first term they were enrolled, were Associate of Arts degree seeking, maintained full time status during the first term, and did not test into college preparatory classes according to state standards in effect

during the 1991 fall term. All students meeting these criteria were included in the study. The study tracked the same cohort of students until they graduated, stopped attending college, or at the end of 4 years. The academic performance and persistence of students who had completed a college orientation class during their first term was compared to students who did not take a college orientation class during their first term in college.

Research Procedure

Data for this study were gathered by a computer search of the historical database files from each of the four participating institutions. Data collection was coordinated by the researcher with the assistance of the Office of Institutional Research at Santa Fe Community College, using data reported by the Florida Division of Community Colleges.

Data Collection and Analysis

Measurements were taken at the end of the first term and at the end of first, second, third, and fourth years. The dependent variables were date of degree completion or end of continuous enrollment, cumulative grade point average at the end of each measurement period, total number of course withdrawals at the end of each measurement period, total number of course repetitions at the end of each measurement period, and total number of credit hours attained at the end of each measurement period. The independent variables were participation/nonparticipation in a college orientation class, sex, race, age, and institution of attendance. Four institutions of varying size and geographic locations have been chosen to observe if these variables influence persistence.

Quantitative data analysis was used to evaluate the five research questions outlined. To assess population demographics, descriptive statistics of central tendency

and dispersion were used. An analysis of variance model was applied to address questions 1 through 6.

Summary

The purpose of this study was to ascertain through the use of historical academic records if there is a significant relationship between taking a community college orientation course during the first term and the retention, persistence, and time to degree completion of students. Student data encompassing a 4-year time period were collected from four community colleges that varied in institutional size and location. Data analysis for this study applied descriptive statistics of central tendency and dispersion, and analysis of variance models.

CHAPTER 4

RESULTS

The purpose of this study was to explore whether there is a significant relationship between taking a community college orientation course during the first term in college and the retention, persistence, and time to degree completion of students. An examination was made to see whether an orientation class impacts retention, number of course withdrawals, students' grade point average over the long term, number of courses repeated, and the total number of credit hours required to complete the degree.

Data were collected from Miami-Dade Community College, Okaloosa-Walton Community College, Santa Fe Community College, and Tallahassee Community College. The resulting sample totaled 1,400 participants, of which 31.57% (N=442) had taken a college orientation class their first term and 68.43% (N=958) that had never taken a college orientation class. When the sample is viewed by individual institutions, there were 21.33% (N=167) of the participants that had taken a college orientation class their first term and 78.67% (N=616) that had never taken a college orientation class at Miami-Dade Community College; 91.54% (N=119) of the participants that had taken a college orientation class their first term and 8.46% (N=11) that had never taken a college orientation class at Okaloosa Walton Community College; 48.70% (N=131) of the participants that had taken a college orientation class their first term and 51.30% (N=138) that had never taken a college orientation class at Santa Fe Community College; and 11.47% (N=25) of the participants that had taken a college orientation class their first

term, and 88.53% (N=193) that had never taken a college orientation class at Tallahassee Community College.

The gender division of the sample was 50.21% female (N=703) and 49.79% male (N=697). Of the female participants, 33% (N=471) had taken a college orientation class their first term, and 67% (N=232) had never taken a college orientation class. Of the male participants, 30.13% (N=210) had taken a college orientation class their first term, and 69.87% (N=487) had never taken a college orientation class.

The racial/ethnic divisions of the sample were 51.4% white (N=720), 36.8% Hispanic (N=515), 8.9% African American (N=125), 2.4% Asian (33), and 0.5% other minority (N=7). Of the white participants, 38.33% (N=276) had taken a college orientation class their first term, and 61.67% (N=444) had never taken a college orientation class. Of the Hispanic participants, 19.42% (N=100) had taken a college orientation class their first term, and 80.58% (N=415) had never taken a college orientation class. Of the African American participants, 48% (N=60) had taken a college orientation class their first term, and 52% (N=65) had never taken a college orientation class. Of the Asian participants, 18.18% (N=6) had taken a college orientation class their first term, and 81.82% (N=27) had never taken a college orientation class. None of the other minority participants had taken a college orientation class their first term.

The age of the sample ranged from 15 to 44 years of age, with a mean age of 19.68 years of age. The standard deviation was 2.10.

The Statistical Analysis System (SAS) was used to compute analysis of variance (ANOVA) for the dependent and independent variables. The level of significance for all analyses was set at $p < .05$. This study examined the following research questions:

1. Is there a difference between students who have taken a college orientation class and those who have not taken a college orientation class (in their first term) in retention after 1 year, 2 years, 3 years, and 4 years?

An ANOVA was performed to test for mean differences in the variable of status (completed a college orientation class during the first term of college as opposed to not having taken a college orientation class during the 4-year period of the study) for retention over the 4-year period of the study. The results indicated that there was no significant difference found for the means of the independent variable of status. Table 1 shows the means and standard deviations for the retention variable of students who had taken the orientation class their first term and for students who had never taken the class.

Table 1

Means and Standard Deviations of the Variable Retention for Students First and Never

Variable	First			Never		
	N	Mean	SD	N	Mean	SD
Retention	442	3.45701357	0.94001889	951	3.48370137	0.94004332

2. Is there a difference between students who have taken a college orientation class and those who have not taken a college orientation class (in their first term) in number of course withdrawals after 1 year, 2 years, 3 years, and 4 years?

An ANOVA was performed to test for mean differences in the variable of status for number of course withdrawals after 1 year, 2 years, 3 years, and 4 years. There was no significant difference found for the independent variable of status at the end of years 1, 2, 3, or 4. Table 2 shows the means and standard deviations of the total number of course

withdrawals for students who had taken the orientation class their first term and for students who had never taken the class.

Table 2

Means and Standard Deviations of the Variable Withdrawal for Students First and Never

Variable	First			Never		
	N	Mean	SD	N	Mean	SD
Withdrawals 1	442	0.97511312	1.30646938	951	1.07045216	1.32278801
Withdrawals 2	442	2.18778281	2.27846769	951	2.35331230	2.26536556
Withdrawals 3	442	2.99773756	3.00830209	951	3.28706625	3.19582473
Withdrawals 4	442	3.41402715	3.50872997	951	3.70347003	3.66324253

3. Is there a difference between students who have taken a college orientation class those who have not taken a college orientation class (in their first term) in grade point average after 1 year, 2 years, 3 years, and 4 years?

An ANOVA was performed to test for mean differences in the variable of status for grade point average at the end of years 1, 2, 3, and 4. There was no significant difference found for the independent variable of status at the end of years 1, 2, 3, or 4. Table 3 shows the means and standard deviations of the grade point average for students who had taken the orientation class their first term and for students who had never taken the class.

4. Is there a difference between students who have taken a college orientation class and those who have not taken a college orientation class (in their first term) in total number of courses repeated after 1 year, 2 years, 3 years, and 4 years?

Table 3

Means and Standard Deviations of the Variable Grade Point Average for Students First and Never

Variable	First			Never		
	N	Mean	SD	N	Mean	SD
GPA Year 1	442	2.83476944	0.76461336	951	2.76646810	0.81220269
GPA Year 2	407	2.66605018	0.76016249	856	2.69091551	0.74779122
GPA Year 3	324	2.68291730	0.69720083	735	2.71155841	0.68446290
GPA Year 4	189	2.58157764	0.61907624	433	2.67210337	0.57705572

An ANOVA was performed to test for mean differences in the variable of status for total number of courses repeated at the end of years 1, 2, 3, and 4. There was no significant difference found for the independent variable of status at the end of years 1, 2, 3, or 4. Table 4 shows the means and standard deviations for total number of courses repeated for students who had taken the orientation class their first term and for students who had never taken the class.

Table 4

Means and Standard Deviations of the Variable Courses Repeated for Students First and Never

Variable	First			Never		
	N	Mean	SD	N	Mean	SD
Repeat Year 1	442	0.29864253	0.62193318	951	0.28601472	0.65067091
Repeat Year 2	442	1.44796380	1.44223872	951	1.40063091	1.41880588
Repeat Year 3	442	2.22398190	1.99024024	951	2.31650894	2.16083093
Repeat Year 4	442	2.65610860	2.45028968	951	2.72344900	2.58095598

5. Is there a difference between students who have taken a college orientation class and those who have not taken a college orientation class (in their first term) in total number of credit hours at time of graduation?

Degrees were awarded to 705 participants; 220 (31.21%) of the graduates had attended a college orientation class during their first term in college, while 485 (68.79%) had never taken a college orientation class. An ANOVA was performed to test for mean differences in the variable of status for total number of credit hours completed at the time of graduation. There was no significant difference found for the independent variable of status for total number of credit hours completed at the time of graduation. Table 5 shows the means and standard deviations of the total number of credit hours at time of graduation for students who had taken the orientation class their first term and for students who had never taken the class.

Table 5

Means and Standard Deviations of the Total Number of Hours at Graduation for Students First and Never

Variable	First			Never		
	N	Mean	SD	N	Mean	SD
Hours	220	55.96363636	18.09282371	483	58.03271222	16.92166742

6. Do age, gender, and race interact with taking a college orientation course (in their first term) to affect retention, course withdrawal, grade point average, courses repeated, and number of credit hours taken at time of graduation?

The analysis of the data indicate that no significant interaction was found between age, gender, and race affecting retention, course withdrawal, grade point average, courses repeated, and the number of credit hours taken at time of graduation.

Although the findings were not a part of the study, significant difference was observed between the variables of gender, race/ethnicity, age, retention, course withdrawals, grade point average, course repetitions, and number of credit hours at time of graduation. The differences are listed below.

Retention. There was significant difference found between the means for the independent variable of gender ($F = 8.66$, $p = 0.0033$). The ANOVA for retention over the 4-year period of the study is shown in Table 6.

Table 6

Analysis of Variance of Retention by Status, Participant Age, Participant Gender, and Participant Race

Source	DF	Sum of Squares	Mean Square	F Value	Pr>F
Model	11	30.6353807	2.7850355	3.22	0.0002
Error	1379	1194.4012735	0.8661358		
Corrected Total	1390	1225.0366643			
STATUS	1	0.23795158	0.23795158	0.27	0.6003
AGE	1	2.2024441	2.20244411	2.54	0.1110
GENDER	1	7.50414382	7.50414382	8.66	0.0033*
RACE	3	5.24358248	1.74786083	2.02	0.1095
AGE*STATUS	1	0.23825365	0.23825365	0.28	0.6000
STATUS*GENDER	1	0.53929166	0.53929166	0.62	0.4302
STATUS*RACE	3	3.97353360	1.32451120	1.53	0.2051

* $p < .05$

Course withdrawals. For year 1 there was significant difference found between the means for the independent variable of race ($F = 4.10, p = 0.0060$). The ANOVA for number of course withdrawals for year 1 is shown in Table 7. For year 2 there was significant difference found between the means for the independent variable of race ($F = 9.63, p = 0.0001$). The ANOVA for number of course withdrawals for year 2 is shown in Table 8. For year 3 there was significant difference found between the means for the independent variables of gender ($F = 8.47, p = 0.0037$) and race ($F = 10.05, p = 0.0001$). The ANOVA for number of course withdrawals for year 3 is shown in Table 9. For year 4 there was significant difference found between the means for the independent variables of gender ($F = 7.69, p = 0.0056$) and race ($F = 10.12, p = 0.0001$). The ANOVA for number of course withdrawals for year 4 is shown in Table 10.

Table 7

Analysis of Variance of Grade W for First Year by Status, Participant Age, Participant Gender, and Participant Race

Source	DF	Sum of Squares	Mean Square	F Value	Pr>F
Model	11	37.3148491	3.3922590	1.97	0.0280
Error	1379	2375.6657404	1.7227453		
Corrected Total	1390	2412.9805895			
STATUS	1	0.3945499	0.3945499	0.23	0.6323
AGE	1	0.3385731	0.3385731	0.20	0.6576
GENDER	1	4.3060102	4.3060102	2.50	0.1141
RACE	3	21.1824458	7.0608153	4.10	0.0066*
AGE*STATUS	1	0.3953943	0.3953943	0.23	0.6320
STATUS*GENDER	1	1.3074086	1.3074086	0.76	0.3838
STATUS*RACE	3	7.6185752	2.5395251	1.47	0.2198

* $p < .05$

Table 8

Analysis of Variance of Grade W for Second Year by Status, Participant Age, Participant Gender, and Participant Race

Source	DF	Sum of Squares	Mean Square	F Value	Pr>F
Model	11	219.228604	19.929873	3.95	0.0001
Error	1379	6950.360181	5.04145		
Corrected Total	1390	7169.588785			
STATUS	1	5.327525	5.327525	1.06	0.3041
AGE	1	2.117441	2.117441	0.42	0.5170
GENDER	1	15.195126	15.195126	3.01	0.0827
RACE	3	145.650272	48.550091	9.63	0.0001*
AGE*STATUS	1	5.315728	5.315728	1.05	0.3046
STATUS*GENDER	1	8.115119	8.115119	1.61	0.2047
STATUS*RACE	3	15.496801	5.165600	1.02	0.3806

*p < .05

Table 9

Analysis of Variance of Grade W for Third Year by Status, Participant Age, Participant Gender, and Participant Race

Source	DF	Sum of Squares	Mean Square	F Value	Pr>F
Model	11	496.363717	45.123974	4.71	0.0001
Error	1379	13221.839015	9.587991		
Corrected Total	1390	13718.202732			
STATUS	1	1.525925	1.525925	0.16	0.6900
AGE	1	0.003586	0.003586	0.00	0.9846
GENDER	1	81.237458	81.327458	8.47	0.0037*
RACE	3	289.171837	96.390612	10.05	0.0001*
AGE*STATUS	1	1.522830	1.522830	0.16	0.6903
STATUS*GENDER	1	3.936260	3.936260	0.41	0.5218
STATUS*RACE	3	14.942826	4.980942	0.52	0.6689

*p < .05

Table 10

Analysis of Variance of Grade W for Fourth Year by Status, Participant Age, Participant Gender, and Participant Race

Source	DF	Sum of Squares	Mean Square	F Value	Pr>F
Model	11	627.403604	57.036691	4.48	0.0001
Error	1379	17574.963038	12.744716		
Corrected Total	1390	18202.366643			
STATUS	1	1.834703	1.834703	0.14	0.7044
AGE	1	0.002768	0.002768	0.00	0.9882
GENDER	1	98.035054	98.035054	7.69	0.0056*
RACE	3	386.847499	128.949166	10.12	0.0001*
AGE*STATUS	1	1.834346	1.834346	0.14	0.7045
STATUS*GENDER	1	11.254532	11.254532	0.88	0.3475
STATUS*RACE	3	13.512303	4.504101	0.35	0.7867

*p < .05

Grade point average. For year 1 there was significant difference found between the data for the independent variables of age ($F = 12.42$, $p = 0.0004$) and gender ($F = 27.64$, $p = 0.0001$). The ANOVA for grade point average at the end of year 1 is shown in Table 11. For year 2 there was significant difference found between the data for the independent variables of age ($F = 10.24$, $p = 0.0014$) and gender ($F = 16.56$, $p = 0.0001$). The ANOVA for grade point average at the end of year 2 is shown in Table 12. For year 3 there was significant difference found between the data for the independent variables of age ($F = 7.12$, $p = 0.0077$) and gender ($F = 21.31$, $p = 0.0001$). The ANOVA for grade point average at the end of year 3 is shown in Table 13. For year 4 there was significant difference found between the data for the independent variables of age ($F = 5.00$,

Table 11

Analysis of Variance of Grade Point Average for First Year by Status, Participant Age, Participant Gender, and Participant Race

Source	DF	Sum of Squares	Mean Square	F Value	Pr>F
Model	11	37.3315640	3.3937785	5.54	0.0001
Error	1379	844.0847950	0.6120992		
Corrected Total	1390	881.4163590			
STATUS	1	0.0045372	0.0045372	0.01	0.9314
AGE	1	7.6019451	7.6019451	12.42	0.0004*
GENDER	1	16.9169813	16.9169813	27.64	0.0001*
RACE	3	3.3885290	1.1295097	1.85	0.1370
AGE*STATUS	1	0.0042822	0.0042822	0.01	0.9334
STATUS*GENDER	1	0.2449933	0.2449933	0.40	0.5271
STATUS*RACE	3	2.1797364	0.7265788	1.19	0.3133

*p < .05

Table 12

Analysis of Variance of Grade Point Average for Second Year by Status, Participant Age, Participant Gender, and Participant Race

Source	DF	Sum of Squares	Mean Square	F Value	Pr>F
Model	11	22.2090554	2.0190050	3.67	0.0001
Error	1249	686.8816814	0.5499453		
Corrected Total	1260	709.0907369			
STATUS	1	0.01440218	0.01440218	0.03	0.0715
AGE	1	5.63229663	5.63229663	10.24	0.0014*
GENDER	1	9.10677269	9.10677268	16.56	0.0001*
RACE	3	1.20788600	0.40262867	0.73	0.5329
AGE*STATUS	1	0.01426665	0.01426665	0.03	0.8721
STATUS*GENDER	1	0.00023712	0.00023712	0.00	0.9834
STATUS*RACE	3	0.67785190	0.22595063	0.14	0.7452

*p < .05

Table 13

Analysis of Variance of Grade Point Average for Third Year by Status, Participant Age, Participant Gender, and Participant Race

Source	DF	Sum of Squares	Mean Square	F Value	Pr>F
Model	11	21.0784390	1.9162217	4.18	0.0001
Error	1047	479.9840352	0.4584375		
Corrected Total	1058	501.0624741			
STATUS	1	0.21867360	0.21867360	0.48	0.4899
AGE	1	3.26612552	3.26612552	7.12	0.0077*
GENDER	1	9.77137202	9.77137202	21.31	0.0001*
RACE	3	1.01590818	0.33863606	0.74	0.5291
AGE*STATUS	1	0.21904526	0.21904526	0.48	0.4896
STATUS*GENDER	1	0.00020426	0.00020426	0.00	0.9832
STATUS*RACE	3	2.78825962	0.92941987	2.03	0.1084

*p < .05

p = 0.0257) and gender (F = 4.37, p = 0.0369). The ANOVA for grade point average at the end of year 4 is shown in Table 14.

Course repetition. For year 1 there was no significant difference found in any variable on total number of courses repeated. For year 2 there was significant difference found between the means for the independent variables of gender (F = 7.53, p = 0.0061) and race (F = 9.28, p = 0.0001). The ANOVA for total number of courses repeated at the end of year 2 is shown in Table 15. For year 3 there was significant difference found between the means for the independent variables of gender (F = 5.83, p = 0.0159) and race (F = 11.50, p = 0.0001). The ANOVA for total number of courses repeated at the end of year 3 is shown in Table 16. For year 4 there was significant difference found between the means for the independent variables of gender (F = 5.72, p = 0.0169) and

Table 14

Analysis of Variance of Grade Point Average for Fourth Year by Status, Participant Age, Participant Gender, and Participant Race

Source	DF	Sum of Squares	Mean Square	F Value	Pr>F
Model	11	7.37353517	0.67032138	1.95	0.0309
Error	610	209.60979766	0.34362262		
Corrected Total	621	216.98333283			
STATUS	1	0.47987170	0.47987170	1.40	0.2378
AGE	1	1.71927736	1.71927736	5.00	0.0257*
GENDER	1	1.50302624	1.50302624	4.37	0.0369*
RACE	3	2.41403692	0.80467897	2.34	0.0722
AGE*STATUS	1	0.84124716	0.84124716	1.40	0.2371
STATUS*GENDER	1	0.05551744	0.05551744	0.16	0.6879
STATUS*RACE	3	1.35631888	0.45210629	1.32	0.2683

*p < .05

Table 15

Analysis of Variance of Total Number of Courses Repeated at End of Second Year by Status, Participant Age, Participant Gender, and Participant Race

Source	DF	Sum of Squares	Mean Square	F Value	Pr>F
Model	11	98.5165411	8.9560492	4.53	0.0001
Error	1379	2729.1383835	1.9790706		
Corrected Total	1390	2827.6549245			
STATUS	1	1.6799207	1.6799207	0.85	0.3570
AGE	1	5.1530455	5.1530455	2.60	0.1068
GENDER	1	14.9025726	14.9025726	7.53	0.0061*
RACE	3	55.0703488	18.3567829	9.28	0.0001*
AGE*STATUS	1	1.68363220	1.68363220	0.85	0.3565
STATUS*GENDER	1	0.1239002	0.1239002	0.06	0.8025
STATUS*RACE	3	7.1254743	2.3751581	1.20	0.3084

*p < .05

Table 16

Analysis of Variance of Total Number of Courses Repeated at End of Third Year by Status, Participant Age, Participant Gender, and Participant Race

Source	DF	Sum of Squares	Mean Square	F Value	Pr>F
Model	11	262.318836	23.847167	5.55	0.0001
Error	1379	5920.656002	4.293442		
Corrected Total	1390	6182.974838			
STATUS	1	0.628400	0.628400	0.15	0.7021
AGE	1	9.139642	9.139642	2.13	0.1448
GENDER	1	25.021574	25.021574	5.83	0.0159*
RACE	3	148.177154	49.392385	11.50	0.0001*
AGE*STATUS	1	0.628710	0.628710	0.15	0.7020
STATUS*GENDER	1	1.946039	1.946039	0.45	0.5009
STATUS*RACE	3	10.277452	3.425817	0.80	0.4950

*p < .05

race ($F = 11.32$, $p = 0.0001$). The ANOVA for total number of courses repeated at the end of year 4 is shown in Table 17.

Number of credit hours at time of graduation. There was significant difference found between the means for the independent variables of race ($F = 6.34$, $p = 0.003$). The ANOVA for total number of credit hours completed at the time of graduation is shown in Table 18.

This chapter presented discussion of the procedures for the analysis and the results of this research. The results of the statistical analyses reveal that there were no differences in group means between the individuals that participated in the college orientation class and those that did not. These analyses indicate that taking a college orientation class the first term at a community college does not have significant effect on

Table 17

Analysis of Variance of Total Number of Courses Repeated at End of Fourth Year by Status, Participant Age, Participant Gender, and Participant Race

Source	DF	Sum of Squares	Mean Square	F Value	Pr>F
Model	11	377.503092	34.318463	5.50	0.0001
Error	1379	8596.873616	6.234136		
Corrected Total	1390	8974.376707			
STATUS	1	1.724725	1.724725	0.28	0.5990
AGE	1	12.211825	12.211825	1.96	0.1619
GENDER	1	35.662231	35.662231	5.72	0.0169*
RACE	3	211.618224	70.539408	11.32	0.0001*
AGE*STATUS	1	1.719932	1.719932	0.28	0.5995
STATUS*GENDER	1	9.082397	9.082397	1.46	0.2276
STATUS*RACE	3	21.340644	7.113548	1.14	0.3313

*p < .05

Table 18

Analysis of Variance of Total Number of Credit Hours at Time of Graduation by Status, Participant Age, Participant Gender, and Participant Race

Source	DF	Sum of Squares	Mean Square	F Value	Pr>F
Model	11	8713.19005	792.10819	2.71	0.0020
Error	691	201640.85609	291.81021		
Corrected Total	702	210354.04615			
STATUS	1	370.76455	370.76455	1.27	0.2601
BYEAR	1	70.27562	70.27562	0.24	0.6238
GENDER	1	318.27432	318.27432	1.09	0.2967
RACE	3	5552.67397	1850.89132	6.34	0.0003*
BYEAR*STATUS	1	367.95877	367.95877	1.26	0.2619
STATUS*GENDER	1	99.74374	99.74374	0.34	0.5590
STATUS*RACE	3	1198.74887	399.58296	1.37	0.2510

*p < .05

retention, course withdrawal patterns, grade point average, courses repetition patterns, and the total number of credit hours at time of graduation. A discussion of these results and recommendations for further research are presented in Chapter 5.

CHAPTER 5 DISCUSSION

Purpose Overview

This study was designed to explore whether there is a significant relationship between taking a community college orientation course during the first term and the retention, persistence, and time to degree completion of students. The relationship of the findings to the six research questions is discussed in this chapter. The remainder of this chapter includes limitations of the study, implications of the findings and recommendations, and the chapter summary.

Discussion of Results

Research Question 1

The first research question addressed the issue of whether or not there is a difference in retention between students who have taken an orientation class their first term in college and those who have never taken an orientation class. Retention for this study was based upon continuous enrollment either until degree completion or to the point at which a student has not registered for classes for the following academic term. According to Tinto (1993), integration with the social and academic systems of a college early in a student's career is believed to enhance the individual's intentions and commitments and, in turn, facilitates student retention. The college orientation class is designed to integrate a student into the social and academic communities of the college, therefore, promoting improved retention.

Results of this study indicate that students who had taken the class did not have a difference in retention at the end of year 1, 2, 3, or 4 than students who had not taken the college orientation class. There was no statistically significant difference between the two student populations. The data indicated that a one hour college orientation class does not impact retention of students at the community college who have completed a 1-credit-hour college orientation course during their first term.

Research Question 2

The second research question explored whether there is a difference in the number of course withdrawals between students who have taken an orientation class their first term in college and those who have never taken an orientation class. There was no significant difference found in the number of course withdrawals between the two groups studied over the 4-year period

A student's commitment to the institution and to the goal of college graduation may be reflected in his/her course withdrawal pattern. A course withdrawal is not solely an academic performance, or preparedness, indicator. Students at a community college may withdraw from coursework due to schedule conflicts, economic issues, or as a result of family or personal crisis. Integration into the academic and social systems of the college promotes goal and degree completion (Tinto, 1993), thus reducing the need to withdraw from coursework. The results of this study indicate that the orientation class is not a sufficient intervention to influence course withdrawal over a longer time span.

Research Question 3

The third research question examined whether there was a difference in means of grade point averages between students who had taken an orientation class their first term

in college and those who had never taken a college orientation class. The study does not seem to support that one class at the start of a student's academic has a lasting impact on academic performance through a 4-year tenure. There was no significant difference in grade point averages between the two groups studied.

Research Question 4

The fourth research question examined the relationship between the number of courses a student repeated during their academic career and their attendance in a college orientation course their first term in college. According to Tinto's (1993) theory of student retention, the frequency of course repetition, as well as any educational attainment strategy, is mediated by a student's connection to both the institution and his/her own educational goals. Although not directly a measure of student commitment, it appears that an orientation course taken during the first term does not affect a student's connection to the institution. No significant difference was observed between the group means for courses repeated based upon participation or nonparticipation in a college orientation class.

Research Question 5

The fifth research question explored the total number of credit hours taken at the time of graduation. The question attempted to understand if students who have taken a college orientation class and have persisted to graduation have done so in a more efficient manner. Efficiency is measured by the total number of credit hours accumulated at the time the student requests to graduate. There was no significant difference in group means for total number of hours at the time of graduation based upon participation or nonparticipation in a college orientation class.

Research Question 6

The sixth research question sought to understand if there were any differences within subsets of the population that had either taken or had not taken a 1-hour college orientation class their first term at a community college. No direct main effect was discovered between the study's dependent and independent variables, nor was there any significant interaction between the variables of age, gender, race/ethnicity, and participation in the class. The results of the study indicate that a 1-hour college orientation class during the first term at a community college had no effect on the dependent variables, regardless of the participant's age, gender, or race/ethnicity.

Although not a focus of the study, significant differences were found related to gender, race/ethnicity, and age as they interacted with retention, number of class withdrawals, grade point average, number of courses repeated, and total number of credit hours at time of graduation independent of having taken, or not taken, a college orientation class. Further analysis of these differences would have been beyond the scope of this project.

The research questions attempted to assess the long-term impact of a college orientation class upon first term, academically prepared community college students. Based upon Tinto's (1993) work, it was predicted that the class would have an effect upon a student's retention, number of course withdrawals, grade point average, number of course repetitions, and total number of credit hours acquired at time of graduation from the community college. The results of the study did not support the prediction.

Limitations

The study was limited by the inability to select randomly and assign participants to classes and to control groups. This study did not control for the possibility that the characteristics that shape a student's decision to take, or not to take, a college orientation class may also impact his/her future academic progress and success. The study was unable to assess prior differences between those students who enrolled in the college orientation class and those who did not. There may have been a variety of other factors, particularly motivation, that could also relate to future performance in college. Davis-Underwood and Lee (1994) suggested that students who choose to participate in a freshman seminar course are probably different from those who choose not to participate in terms of motivational level and educational goals.

For the population in this study, taking a 1-credit-hour college orientation class during the first term in college did not influence the study's dependent variables. In the absence of a pure experimental design, it is impossible to know if the outcomes of taking the course have not been molded by selection factors.

Although the study found differences in retention by gender, these differences were not related to the independent variable of participation/nonparticipation in an orientation class. Equally, race/ethnicity and age appeared significant in relation to retention variables but not in relation to having taken an orientation class. Caution should be used not to make any generalizations about gender, age, or race/ethnicity based on the findings of this study.

Implications of the Findings and Recommendations

This research has helped to increase understanding of the impact of taking a 1-credit-hour college orientation class at the time a student enters the community college. There are implications for theory, college practice, and research.

Implications for Theory

Tinto's (1993) model stated that individuals enter institutions of higher education with varying background attributes and experiences. These characteristics affect the student's initial goal commitment and initial commitment to the institution. As students establish themselves within the new institution, they interact with two primary systems in the college community--the academic system and the social system. Over a period of time, this interaction of background variables and initial commitments with the academic and social systems results in varying degrees of academic integration and social integration. The process of interaction leads to further changes in commitments, which leads ultimately to persistence or departure from the college. Academic and social integration are the factors most critical in the decision to drop out. "Given individual characteristics, prior experiences, and commitments, the model argues that it is the individuals integration into the academic and social systems of the college that most directly relates to his continuance in that college" (Tinto, 1975, p. 96).

The college orientation class is designed to integrate the student into the social and academic systems of college (Astin, 1993; Gardner, 1986). It was assumed the social and academic interaction that takes place in a college orientation class enhances both intentions and commitments. This study investigated if taking a 1-credit college orientation class, which is presumed to build both academic and social community, leads

to greater retention for college ready participants over a 4-year period. Institutional measures used to assess retention were enrollment, number of course repetitions and withdrawals, and grade point average. The results of the research, however, did not find support for linkages between Tinto's theoretical model and a 1-hour orientation class.

Based upon Tinto's theory (1975), this research assumed that intentions and commitment are continuously shaped and molded by the student's experiences in college. This study focused on the temporal character of persistence and the transition process from past community to membership in the new communities of the college. Tinto did not describe change in levels of intention and commitment in relation to a specific time frame. Instead, he described integration as a fluid process not restrained by boundaries. When viewing integration from an institutional programming viewpoint, academic and social integration may have developmental qualities that are sequential or governed by stage or time. Retention strategies may be limited in the minimum length of time necessary before producing meaningful results. Although the research did not test or measure student integration into the college, it may suggest that time plays a role in the process of integration into the academic and social communities of a community college. A longer period of academic contact than is possible in a single orientation class could translate to measurable differences.

The study was based upon a 1-credit-hour class format. The college orientation class is also taught at other institutions as a 2- and 3-credit-hour class. A survey of 696 higher education institutions by Barefoot (1992) reported that the majority of orientation classes (85.6%) awarded academic credit. The majority of those classes were taught as 1-credit-hour classes (44.8% awarded 1 credit hour, 13.15 awarded 2 credit hours, and

19.2% awarded 3 credit hours). Although this study indicates that a 1-credit-hour college orientation class did not show long-term influence to retention factors, it would be important to understand if this situation would change with longer periods of class contact and follow-up campus activities. There may be a minimum threshold of time necessary before it is possible to establish a meaningful environment in which integration can take place. Additional study of the class in a 2- and 3-credit-hour format with community involvement assignments is recommended.

The study did not find any influence from the college orientation class during the 4-year period. The fact that change was not observed may lend support to other studies reporting that any positive influence of the orientation class diminishes over time (Napoli, 1996; Belcher et al., 1987). Although the 1-credit college orientation class may provide a rich starting point for the new student, there is no indication that the benefits from this experience are lasting.

Implications for College

College orientation classes may not be an appropriate response for all student populations. A college orientation class has been shown to benefit students who are academically disadvantaged. Blackhurst (1994) found that the college orientation class taken the first term increases the academic performance of low-achieving students relative to other students. All participants in this study were selected based upon their college ready academic status. A college orientation class may be beneficial for students who have skills deficits and reason to believe that they are not a full members of a community of learning. The class could conceivably be better suited for remedial students at their point of entry to the institution.

The study also leads to questions regarding what are the qualities that constitute what is perceived as genuine community. Interventions designed to foster a sense of community are structured within the bureaucracy of higher education. Structured experiences may not be removed enough from the system to allow students a sense of ownership. The college orientation class, as well as learning communities and other retention strategies, may not manifest or capture the necessary serendipity of academic or social integration. It is possible that students perceived the class environment to be artificial.

Why would a college orientation class environment appear unnatural? The students may not have identified the class as a "genuine" academic accomplishment. The college orientation class does not satisfy general education requirements for any of the four schools in the study. Although the class earns elective credits that are applied towards degree satisfaction, the class is sometimes perceived not to be academically challenging. This may generate from the course's nontraditional college subject material.

In observing the range of grades awarded for the orientation class at all four institutions in the study, the class has a high success rate. For the 442 students in the study who had completed a college orientation class, 285 (64.48%) received a grade of A; 100 (22.62%) received a grade of B; 41 (9.28) received a grade of C; 8 (1.81%) received a grade of D; and 8 (1.81%) failed the class. The high success rate for students in the class may have a reverse message to the participants. The course may be thought of as being "easy." It is possible that if a class does not meet an individual's criteria as a valid academic experience, the class may not create an effective academic or social integration experience.

Recommendations for Future Research

This study leads to several recommendations for future research. These recommendations could enhance the understanding of the impact of a college orientation class at the community college level.

1. Given that the present study did not find that the 1-credit-hour orientation class had an impact on the variables studied, it is important to know whether a longer period of contact would create a measurable difference. Further investigation is necessary to understand whether a 2- or 3-credit-hour orientation class is an adequately intensive intervention to bring about change in retention, number or classes withdrawals, grade point average, number of course repetitions, and total number of credit hours at time of graduation.

2. Looking closer at institutional impact upon the campus environment can add to the understanding of the college orientation class. How variations from one campus to another impact the effectiveness of the college entry for students is not well understood. Gordon and Crites (1984) asserted that the primary purpose of a college orientation class must be defined by the needs of the students on a specific campus. Furthermore, data that ignore institutional context will rarely be generalizable from institution to institution (Cope & Hannah, 1975). This study focused on schools within a state system that maintained similar degree requirements and common course classification. This may not be enough to understand the differences of campus interaction upon the college orientation class participants. A study that explores the influence of institutional characteristics on college orientation classes is recommended.

3. When studying variables of retention, general institutional databases may not be sufficient to measure critical differences in the student experience. The results of this study may indicate that only knowing if a student has, or has not, taken the class is in itself too broad a variable to determine what has impacted the developmental variables under consideration. A broader range of student information would add insight to understanding potential impact of the orientation process in facilitating the development of academic and social community. Future research projects are recommended that study additional retention markers, based on Tinto's theory, that can be easily incorporated into institutional databases. For example, although it was not possible in this study (due to the use of historical data), knowing each participant's initial major and highest expected degree would provide a more complete view of the individuals intentions and aspirations.

4. The study was restricted by the absence of random selection and random assignment. It is impossible to know if the student who voluntarily chooses to take a college orientation class is different than one who does not register for the class their first semester. Future research of the college orientation class would be enhanced by an experimental, longitudinal design.

Summary

In this chapter, the results of the statistical analysis of the data are discussed. The dependent variables were (a) date of degree completion or end of continuous enrollment, (b) cumulative grade point average at the end of each measurement period, (c) total number of course withdrawals at the end of each measurement period, (d) total number of course repetitions at the end of each measurement period, and (e) total number of credit hours attained at the end of each measurement period. The independent variables were

(a) participation/nonparticipation in a college orientation class, (b) sex, (c) race/ethnicity, and (d) age. Limitations of the research were considered. Implications of the results for theory and college practice were discussed. Finally, suggestions were made for further research.

REFERENCES

Adelman, C. (1991). Women at thirtysomething: Paradoxes of attainment. Washington, DC: Office of Educational Research and Improvement.

Allen, D. (1994, May). The Iliad and the odyssey of student attrition. Paper presented at the Annual Forum of the Association for Institutional Research, New Orleans, LA.

Alsalam, N. (1993). The condition of education 1993. Washington, DC: National Center for Educational Statistics.

American College Testing Program. (1993). National dropout rates, ACT institutional data file, 1993. Iowa City, IA: Author.

Anderson, K. (1981). Post-high school experiences and college attrition. Sociology of Education, 54, 1-15.

Apps, J. W. (1991). The adult learner on campus: A guide for instructors and administrators. Chicago: Follet.

Astin, A. W. (1972). College dropouts: A national profile (Vol. 7, No. 1). Washington, DC: American Council on Education, Office of Research.

Astin, A. W. (1973). The impact of dormitory living on students. Educational Record, 54, 204-210.

Astin, A. W. (1975). Preventing students from dropping out. San Francisco: Jossey-Bass.

Astin, A. W. (1977). Four critical years: Effects of college on beliefs, attitudes, and knowledge. San Francisco: Jossey-Bass.

Astin, A. W. (1982). The American freshman, 1966-1981: Some implications for educational policy and practice. Washington, DC: Department of Education, National Commission on Excellence in Education. (ERIC Document Reproduction Service No. ED 227 070)

Astin, A. W. (1985). Achieving educational excellence: A critical assessment of priorities and practices in higher education. San Francisco: Jossey-Bass.

Astin, A. W. (1993). What matters in college: Four critical years revisited. San Francisco: Jossey-Bass.

Astin, A., Korn, W., & Green, K. (1987). Retaining and satisfying students. Educational Record, 68, 36-41.

Astin, A., & Panos, R. (1969). The educational and vocational development of college students. Washington, DC: American Council on Education.

Baker, R. (1986). An analysis of retention and attrition at MiraCosta College, Del Mar, CA: MiraCosta College.

Barefoot, B. O., & Fidler, P. P. (1996). The 1994 national survey of freshman seminar programs: Continuing innovations in the collegiate curriculum. The Freshman Year Experience Monograph Series, 20.

Beal, P. E., & Noel, L. (1980). What works in student retention: The report of a joint project of the American College Testing Program and the National Center for Higher Education Management Systems. Iowa City, IA: American College Testing Program. (ERIC Document Reproduction Service No. ED 197 635)

Bean, J. P. (1980). Dropouts and turnover: The synthesis and test of a causal model of student attrition. Research in Higher Education, 12, 155-187.

Bean, J. P., & Metzner, B. S. (1985). A conceptual model of non-traditional undergraduate student attrition. Review of Education Research, 55, 485-540.

Bean, J. P., & Vesper, N. (1994, November). Gender differences in college student satisfaction. Paper presented at the annual meeting of the Association for the Study of Higher Education, Tucson, AZ.

Belcher, M. J., Ingold, S., & Lombard, M. (1987). Addressing retention through an orientation course: Results from a north campus study (Research Report No. 87-24). Miami, FL: Miami-Dade Community College.

Bell, C., Jr. (1984). Grades as a predictor of attrition. Community College Review, 12(2), 13-19.

Bers, T. H., & Smith, K. E. (1991). Persistence of community college students: The influence of student intent and academic and social integration. Research in Higher Education 32(5), 539-556.

Blackhurst, A. E. (1994). A comparison of student outcomes in freshman seminar courses taught by faculty and student affairs professionals (Doctoral dissertation, Ohio University, 1994). Dissertation Abstracts International, 55(10), 3103A.

Blanc, R. A., Debuhr, L. E., & Martin, D. C. (1983). Breaking the attrition cycle: The effects of supplemental instruction on undergraduate performance and attrition. Journal of Higher Education, 54, 80-90.

Boe, J., & Jolicoeur, P. (1989). The evolution of a freshman seminar. NACADA Journal, 9(1), 51-59.

Borg, W. R., & Gall, M. D. (1989). Educational research: An introduction (5th ed.). New York: Longman.

Bower, L. B. (1996). Promoting new student success in the community college. In J. N. Hankin (Ed.), The community college: Opportunity and access for America's first-year students (pp. 11-18). Monograph Series Number 19, National Resource Center for The Freshman Year Experience and Students in Transition, University of South Carolina.

Brawer, F. B. (1996). Retention-attrition in the nineties. ERIC Digest. Los Angeles, CA: ERIC Clearinghouse for Community Colleges.

Breindel, M. D. (1997). Persistence of students who entered College of the Desert. Palm Desert, CA: Institutional Research, College of the Desert.

Brophy, D. L. (1986). Follow-up study of the fall 1984 Sierra College dropouts. Rocklin, CA: Sierra Joint Community College.

Business/Higher Education Partnership. (1997). Higher education in Florida: An update. Tampa, FL: Author.

Cabrera, A. F. (1990). Exploring the effects of ability to pay on persistence in college. Review of Higher Education, 13(3), 330-36.

Cabrera, A. F. (1992). The role of finances in the persistence process: A structural model. Research in Higher Education, 33(5), 571-94.

Carnegie Foundation for the Advancement of Teaching. (1989). Tribal colleges: Shaping the future of native Americans. Lawrenceville, NJ: Author.

Chapman, D. W., & Pascarella, E. T. (1983). Predictors of academic and social integration of college students. Research in Higher Education, 19(3), 295-322.

Chickering, A. W. (1974). Commuters versus resident students: Overcoming educational inequities of living off campus. San Francisco, CA: Jossey-Bass.

Cohen, A. M., & Brawer, F. B. (1982). The American community college. San Francisco: Jossey-Bass.

Coll, K. M., & VonSeggern, D. J. (1991). Community college retention: Some procedural and programmatic suggestions. Laramie WY.: University of Wyoming.

Cope, R. G. (1978). Why students stay, why they leave. New Directions for Student Services, 3, 1-11.

Cope, R. G., & Hannah, W. (1975). Revolving college doors. New York: John Wiley & Sons.

Craig, K. L. (1994). Student retention and academic performance: Relationship to a freshman seminar/student success course (Doctoral dissertation, The University of Southern Mississippi, 1994). Dissertation Abstracts International, 56(3), 0836A.

Crook, D., & Lavin, D (1989, April). The community college effect revisited: The long-term impact of community college entry on B.A. attainment. Paper presented at the annual meeting of the American Educational Research Association, San Francisco.

Cuseo, J. B. (1991). The freshman orientation seminar: A research-based rationale for its value, delivery, and content. Columbia, SC: National Resource Center for the Freshman Year Experience, University of South Carolina.

Daniels, G. (1990, October). Student intention and retention in a community college setting. Paper presented at the North East Association for Institutional Research, Albany, NY.

Davis-Underwood, M., & Lee, J. A. (1994). An evaluation of the University of North Carolina at Charlotte freshman seminar. Journal of College Student Development, 35, 491-492.

Department of Education, Division of Community Colleges. (1997). Report for the Florida community college system: The fact book. Tallahassee: Division of Community Colleges, Bureau of Research and Information System.

Dey, E., Astin, A., & Korn, W. (1991). The American freshman: Twenty five year trends. Los Angeles, CA: Cooperative Institutional Research Program.

DiCarlo, R. D. (1980). Greenfield Community College: A follow-up survey (September 1979 and September 1980) and study of the attrition at Greenfield Community College. Greenfield, MA: Greenfield Community College.

Dougherty, K. (1987). The effects of community colleges: Aid or hindrance to socioeconomic attainment? Sociology of Education, 60, 86-103.

Dougherty, K. (1992). Community colleges and baccalaureate attainment. Journal of Higher Education, 63, 188-214.

Dougherty, K. J. (1994). The contradictory college: The conflicting origins, impacts and futures of the community college. Albany: State University of New York Press.

Dunphy, L., Miller, T. E., Woodruff, T., & Nelson, J. E. (1987). In Martha Stodt & William Klepper (Eds.), Increasing retention: Academic and student affairs administrators in partnership, New Directions for Higher Education (pp. 39-59). San Francisco: Jossey-Bass.

Durkheim, E. (1951). Suicide, a study in sociology (J. Spaulding & B. Simpson, Trans.). Glencoe, IL: The Free Press.

Earl, A. W., Sr. (1989). A retrospective of the effect of financial aid on college and university enrollment during a period of steady-state and decline. (ERIC Document Reproduction Service No. ED 305 863)

Eckland, B. K. (1964). College dropouts who come back. Harvard Educational Review, 30, 402-420.

Ehrenberg, R., & Sherman, D. (1987). Employment while in college, academic achievement, and postcollege outcomes: A summary of results. Journal of Human Resources, 22, 1-23.

El-Khawas, E. H. (1988). Community college fact book. Macmillan series on higher education. Riverside, NJ: Macmillan Publishing Company.

Feldman, M. J. (1993). Factors associated with one-year retention in a community college. Research in Higher Education, 34(4), 503-12.

Fetters, W. (1977). Withdrawal from institutions of higher education: An appraisal with longitudinal data involving diverse institutions. Washington, DC: U.S. Government Printing Office.

Fidler, P. P. (1985). Research summary--University 101. Unpublished manuscript, University of South Carolina.

Fidler, P. (1991). Relationship of freshmen orientation seminars to sophomore return rates. Journal of the Freshman Year Experience, 3(1), 7-38.

Fidler, P.P., & Hunter, M. S. (1989). How seminars enhance student success. In M. L. Upcraft, J. N. Gardner, & Assoc. (Eds.). The freshman year experience: Helping students survive and succeed in college (pp. 216-237). San Francisco: Jossey-Bass.

Florida Community College System. (1993). 1993 Interim accountability report. Tallahassee, FL: Author.

- Florida Statute 239.117. (1995a). 1995 Supplement to Florida Statutes 1994.
- Florida Statute 240.115. (1995b). 1995 Supplement to Florida Statutes 1994.
- Florida Statute 239.249. (1996). 1996 Supplement to Florida Statutes 1995.
- Fox, R. (1986). Application of a conceptual model of college withdrawal to disadvantaged students. American Educational Research Journal, 23, 415-424.
- Gardner, J. N. (1986). The freshman year experience. College and University, 61, 261-274.
- Gardner, J. N. (1989). Starting a freshman seminar program. In M. L. Upcraft & J. Gardner, & Associates (Eds.), The freshman year experience: Helping students survive and succeed in college (pp. 238-249). San Francisco: Jossey-Bass.
- Gates, A. G., & Creamer, D. G. (1984). Two-year college attrition: Do student or institutions characteristics contribute most? Community/Junior College Quarterly, 8(1-4), 39-51.
- Glass, J. C., Jr., & Garrett, M. S. (1995). Student participation in a college orientation course, retention, and grade point average. Community College Journal of Research and Practice, 19(2), 117-32.
- Gold, B. K. (1981). LACC student survey, fall 1980: Research study number 81-5. Los Angeles, CA: Los Angeles City College.
- Gordon, V. N. (1989). Origins and purposes of the freshman seminar. In M. L. Upcraft, J. Gardner, & Associates (Eds.), The freshman year experience: Helping students survive and succeed in college (pp. 183-197). San Francisco: Jossey-Bass.
- Gordon, V. N., & Crites, T. J. (1984). The freshman seminar course: Helping students succeed. Journal of College Student Personnel, 25, 315-320.
- Gorter, S. (1978). Non-returning students, spring 1978. Trenton, NJ: Mercer County Community College.
- Green, R. M. L. (1995). College success: An evaluation of a freshman orientation course for learning-disabled and non-learning-disabled students (Doctoral dissertation, American International College, 1995). Dissertation Abstracts International, 56(6), 2172A.
- Grunder, P. G., & Hellmich, D. M. (1996). Academic persistence and achievement of remedial students in a community college's success program. Community College Review, 24(2), 21-33.

Guyette, S., & Heth, C. (1983, April). American Indian higher education: Needs and projections. Paper presented at the annual meeting of the American Educational Research Association, Montreal, Quebec, Canada.

Hackman, J. R., & Dysinger, W. S. (1970). Reactions to college withdrawal. Journal of Experimental Education, 38(3), 23-31.

Haggerty, M. (1985). A comparison of selected variables of adult persisters and nonpersisters over the age 24 at an urban commuter university (University of Pittsburgh, 1985). Dissertation Abstracts International, 46(6), 1530A.

Halpin, R. L. (1990). An application of the Tinto model to the analysis of freshman persistence in a community college. Community College Review, 17(4), 22-32.

Hilton, T., & Schrader, W. (1986, April). Pathways to graduate school: An empirical study based on national longitudinal data. Paper presented at the annual meeting of the American Educational Research Association, San Francisco.

Hoff, M. P. (1994, February). Five years of DCS 101: An empirical analysis. Paper presented at the Annual Freshman Year Experience Conference, Columbia, SC.

Huck, S. W., Cormier, W. H., & Bounds, W. G., Jr. (1974). Reading statistics and research. New York: Harper & Row.

Jalomo, R. E., Jr. (1995). First-year student experiences in community college: Making transitions, forming connections, and developing perceptions of student learning. University Park, PA: National Center on Postsecondary Teaching, Learning, and Assessment. (ERIC Document Reproduction Service No. ED 380 179)

Johnston, A. B. (1982). Tallahassee Community College retention study. Tallahassee, FL: Tallahassee Community College.

Jones, D. J., & Watson, B. C. (1990). "High risk" students in higher education: Future trends (ASHE-ERIC Higher Education Report No. 3). Washington, DC: The George Washington University, School of Education & Human Development.

Jones, S. W. (1988). No magic required: Reducing attrition at the community college. Community College Review, 14(2), 15-18.

Keenan, K., & Gabovitch, R. (1995, October). Evaluating the impact of a freshman seminar program on student development and retention. Paper presented at the Annual Conference of the North East Association for Institutional Research, Burlington, VT.

Kester, D. L. (1980, April). Historical highlights of the three-year northern California attrition reduction effort: An overview, from a perspective that overlooks ten years, of the highlights of a three-year California community college research consortium effort to reduce attrition among first-time, full-time freshmen. Paper presented at the Annual Conference for Research and Development officers of the California Commission and Junior College Association, Asilomar, CA.

Lanni, J. C. (1992, March). The longitudinal student success study: The entering student survey. Paper presented at the Annual Meeting of the National Association for Equal Opportunity in Higher Education, Washington, DC.

Lee, M. M. (1996). Student retention survey: Why students did not return, spring semester 1994. Valhalla, NY: Office of Institutional Research, Westchester Community College.

Lenning, O. T., Beal, P. E., & Sauer, K. (1980). Retention and attrition: Evidence for action and research. Boulder, CO: National Center for Higher Education Management Systems.

Levitz, R., & Noel, L. (1989). Connecting students to institutions: Keys to retention and success. In M. L. Upcraft., J. N. Gardner, & Assoc. (Eds.). The freshman year experience: Helping students survive and succeed in college (pp. 65-81). San Francisco: Jossey-Bass.

Lipsky, S. A., & Ender, S. C. (1990). Impact of a study skills course on probationary students' academic performance. Journal of the Freshman Year Experience, 2(1), 7-16.

Lum, G., & Signor, P. (1994). Master student study, Fall 1992 class, Wildwood campus. Harrisburg, PA: Harrisburg Area Community College.

Macmillian, T. F., & Kester, D. M. (1973). Promises to keep: NORCAL impact on student attrition. Community and Junior College Journal, 43(5), 45-46.

Maisto, A. A., Davis, J., Keyes, L. N., & Tammi, M.W. (1987, February). The effectiveness of freshman seminars. Paper presented at the 1987 National Conference on the Freshman Year Experience East, Columbia, SC.

Malin, J. T., Bray, H. B., Dougherty, T. W., & Skinner, W. K. (1980). Factors affecting the performance and satisfaction of adult men and women attending college. Research in Higher Education, 13, 115-130.

Martin, N. K., & Dixon, P. N. (1989). The effects of freshman orientation and locus of control on adjustment to college. Journal of College Student Development, 30, 362-367.

Matonak, A. J. (1987). The application of Tinto's theoretical model of persistence to academically underprepared students in the community college (Doctoral dissertation, University of Houston, 1987). Dissertation Abstracts International, 49(4), 0744A.

McCormick, A. C. (1990, November). Mobility of educational expectations: The effect of community colleges. Paper presented at the Annual Meeting of the Association for the Study of Higher Education, Portland, OR.

Mcintyre, N. J. (1993). University division academic and career 1010: The impact of a freshman seminar course on student persistence (Doctoral dissertation, The University of Nebraska-Lincoln, 1993). Dissertation Abstracts International, 54(6), 2017A.

Metzner, B.S., & Bean, J. P. (1987). The estimation of a conceptual model of nontraditional undergraduate student retention. Research in Higher Education, 27, 15-39.

Mingle, J. R. (1987). Focus on minorities: Trends in higher education participation and success. Denver, CO: Joint publication of the Education Commission of the States and the State Higher Education Executive Offices.

Mohammadi, J. (1994). Exploring retention and attrition in a two-year public community college. Martinsville, VA: Patrick Henry Community College.

Moline, A. E. (1987). Financial aid and student persistence: An application with causal modeling. Research in Higher Education Journal of the Association for Institutional Research. AIR Forum Issue, 26(2), 130-147.

Moore, N. (1995). Persisters and attrition at San Juan College. Farmington, NM: San Juan College, Office of Institutional Research, Grant Development, and Planning.

Mulligan, S. C., & Hennessy, J. J. (1990). Persistence in a community college: Testing attrition models. Paper presented at the annual meeting of the American Educational Research Association, Boston.

Munro, B. (1981). Dropouts from higher education: Path analysis of a national sample. American Education Research Journal, 18(2), 133-141.

Napoli, A. R. (1996). Psychosocial factors related to retention and early departure of two-year community college students (Doctoral dissertation, State University of New York at Stony Brook, 1996). Dissertation Abstracts International, 57(6), 4093B.

Naretto, J. A. (1995). Adult student retention: The influence of internal and external communities. NASPA Journal, 32(2), 90-97.

Nelson, R. B., Scott, T. B., & Bryan, W. A. (1984). Precollege characteristics and early college experiences as predictors of freshman year persistence. Journal of College Student Personnel, 25, 50-54.

Nespoli, L. A., & Radcliffe, S. K. (1983). Follow-up of 1978 entrants, research report number 32. Columbia, MD : Howard Community College.

Noel, L. (1985). Increasing student retention: New challenges and potential. In L. Noel, R. Levitz, D. Saluri, & Associates (Eds.), Increasing student retention (pp. 1-27). San Francisco: Jossey-Bass.

Noel, L., Levitz, R., & Saluri, D. (1985). Increasing student retention. San Francisco: Jossey-Bass.

Nora, A. (1987). Determinants of retention among Chicano college students: A structural model. Research in Higher Education, 26(1), 31-59.

Ozaki, R. H. (1994). Freshman orientation: A comparison of five-week versus ten-week sessions. Clarkston, GA: Dekalb College.

Pantages, T. J., & Creedon, C. F. (1977). Patterns of student-faculty informal interaction beyond the classroom and voluntary freshman attrition. Journal of Higher Education, 48, 540-552.

Pantages, T. J., & Creedon, C. F. (1978). Studies of college attrition: 1950-1975, Review of Educational Research 48(1), 49-101.

Pascarella, E. (1980). Student-faculty informal contact and student outcomes. Review of Educational Research, 50, 545-595.

Pascarella, E. T. (1985a). Students' affective development within the college environment. Journal of Higher Education, 56(6), 640-63.

Pascarella, E. T. (1985b). The influence of on-campus living versus commuting to college on intellectual and interpersonal self-concept. Journal of College Student Personnel, 26(4), 292-99.

Pascarella, E., Bohr, L., Nora, A., Zusman, B., Inman, P., & Desler, M. (1993). Cognitive impacts of living on campus versus commuting to college. Journal of College Student Development, 34(3), 216-20.

Pascarella, E., Bohr, L., Nora, A., Desler, M., & Zusman, B. (1994a). Impacts on on-campus and off-campus work on first year cognitive outcomes. Journal of College Student Development, 35(5), 364-70.

Pascarella, E., Bohr, L., Nora, A., Ranganathan, S., Desler, M., & Bulakowski, C. (1994b). Impacts on 2-year and 4-year colleges on learning orientations: A preliminary study. Community College Journal of Research and Practice, 18(6), 577-89.

Pascarella, E., Bohr, L., Nora, A., & Terenzini, P. (1995). Cognitive effects of 2-year and 4-year colleges: New evidence. Educational Evaluation and Policy Analysis, 17(1), 83-96.

Pascarella, E. T., & Chapman, D. W. (1983a). A multi-institutional, path validation of Tinto's model of college withdrawal. American Educational Research Journal, 20, 87-102.

Pascarella, E. T., & Chapman, D. W. (1983b). Validation of a theoretical model of college withdrawal: Interaction effects in a multi-institutional sample. Research in Higher Education, 19(1), 25-48.

Pascarella, E. T., & Duby, P. B., & Iverson, B. (1983). A test and re-conceptualization of a theoretical model of college withdrawal in a commuter institution setting. Sociology of Education, 56, 88-100.

Pascarella, E. T., Smart, J.C., & Ethington, C.A. (1986). Long-term persistence of two-year college students. Research in Higher Education, 24 (1) 47-71.

Pascarella, E., & Terenzini, P. (1978). Student-faculty informal relationships and freshman year educational outcomes. Journal of Educational Research, 71, 183-189.

Pascarella, E. T., & Terenzini, P. T. (1991). How college affects students, findings and insights from twenty years of research. San Francisco: Jossey-Bass.

Pascarella, E. T., Terenzini, P. T., & Wolfe, L. M. (1986). Orientation to college and freshman year persistence/withdrawal decisions. Journal of Higher Education, 57, 155-175.

Pascarella, E. T., & Wolfe, L. M. (1985). Persistence in higher education: A nine-year test of a theoretical model. Paper presented at the American Educational Research Association, Chicago, IL.

Porter, O. F. (1990). Undergraduate completion and persistence at four-year colleges and universities. Washington, DC: National Institute of Independent Colleges and Universities.

Price, L. A. (1993). Characteristics of early student dropouts at Allegany Community College and recommendations for early intervention. Cumberland, MD : Allegany Community College.

Quevedo-Garica, E. L. (1987). Facilitating the development of Hispanic college students. In D. W. Wright (Ed.), Responding to the needs of today's minority students. New directions for students services (pp. 49-63). San Francisco: Jossey-Bass.

Raimst, L. (1981). College student attrition and retention (College Board Report No. 81-1). New York: Entrance Examination Board.

Ramaker, J. (1987). Retention at Olympic College: A statistical report, fall 1986-winter 1987. Berrington, WA: Olympic College.

Reinertson, J. (1986). What ever happened to the class of 1983? Flint, MI: Charles Stewart Mott Community College.

Rice, R. L., & Devore, J. (1992). Extended orientation courses at two-year colleges. Community/Junior College Quarterly of Research and Practice, 16(3), 221-30.

Rootman, I. (1972). Voluntary withdrawal from a total adult socializing organization: A model. Sociology of Education, 45, 258-270.

Ross, J. M. (1989). Recruiting and retaining adult students in higher education. In P.S. Cookson (Ed.), Recruiting and retaining adult students (pp. 49-62). San Francisco: Jossey-Bass.

Ross, K. (1990). Eight myths about minorities in higher education. College Board Review, 155, 12-19.

Roueche, J. E., & Roueche, S. D. (1993). Between a rock and a hard place: The at-risk student in the open door college. Washington, DC: Community College Press.

Rugg, E. A. (1983). Design and analysis considerations for longitudinal retention and attrition studies. College and University, 58, 119-135.

Shanley, M. G., & Witten, C. H. (1990). University 101 freshman seminar course: A longitudinal study of persistence, retention, and graduation rates. NASPA Journal, 27(4), 344-352.

Shreve, C. (1995). Retention: NMC ends report, July 1995. Traverse City, MI: Northwestern Michigan College.

Sloan, D. M. (1991). An analysis of the effect of a one-credit orientation course on student retention (Doctoral dissertation, Florida International University, 1991). Dissertation Abstracts International, 52(12), 4199A.

Smedley, B. D., Myers H. F., & Harrell, S. P. (1993). Minority-status stresses and the college adjustment of ethnic minority freshmen. Journal of Higher Education, 64, 434-452.

Smith, D. G. (1982). The next step beyond student development--Becoming partners within our institutions. NASPA Journal, 19(4), 54-58.

Smith, M. E., & Glass, G. V. (1987). Research and evaluation in education and the social sciences. Englewood Cliffs: Prentice-Hall.

Smith, T. M. (1996). The condition of education 1996. Washington, DC: National Center for Educational Statistics.

Spady, W. G. (1970). Dropouts from higher education: An interdisciplinary review and synthesis. Interchange, 1, 64-85.

Staman, E. M. (1980). Predicting student attrition at an urban college (Doctoral dissertation, The College of William and Mary, 1979). Dissertation Abstracts International, 40(8), 4440A.

Stampen, J. O., & Cabrera, A.F. (1988). The targeting and packaging of student aid and its effects on attrition. Economics of Education Review, 7(1), 29-46.

Stupka, E. H. (1986). Student persistence and achievement: An evaluation of the effects of an extended orientation course. Sacramento, CA: Sacramento City College.

Stupka, E. (1993). An evaluation of the short term and long term impact a student success course has on academic performance and persistence. Sacramento, CA: Sacramento City College.

Suffet, E. (1988). Freshman seminar: Final report. Jenkintown, PA: Manor Junior College.

Summerskill, J. (1962). Dropouts from college. In N. Sanford (Ed.), The American college (pp. 627-657). New York: John Wiley and Sons.

Swift, J. S. (1987). Retention of adult college students. NACADA Journal, 7, 7-19.

Sydow, D. L., & Sandel, R. H. (1996, May). Making student retention an institutional priority. Paper presented at the National Institute for Staff and Organizational Development Conference on Teaching and Leadership Excellence, Austin, TX.

Taylor, H. K. (1988). Evaluation of a community college extended orientation course: Effect on self-appraisal and performance (Doctoral dissertation, University of Washington, 1988). Dissertation Abstracts International, 49(4), 0736A.

Temple, M., & Polk, K. (1986). A dynamic analysis of educational attainment. Sociology of Education, 59, 79-84.

Terenzini, P. T., & Pascarella, E. T. (1984). Freshman attrition and the residential context. The Review of Higher Education, 7(2), 111-24.

Thompson, J. (1993). The effects of on-campus residence on first-time in college students. NASPA Journal, 31(1), 41-47.

Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of current research. Review of Educational Research, 45, 89-125.

Tinto, V. (1982). Limits of theory and practice in student attrition. Journal of Higher Education, 53, 687-700.

Tinto, V. (1985). Dropping out and other forms of withdrawal from college. In L. Noel, R. Levitz, D. Saluri, & Associates (Eds.), Increasing student retention (pp. 28-43). San Francisco: Jossey-Bass.

Tinto, V. (1986). Retention: An admission concern. College and University, 61(4), 290-93.

Tinto, V. (1987). Leaving college: Rethinking the causes and cures of student attrition. Chicago: University of Chicago Press.

Tinto, V. (1988). Stages of student departure: Reflections on the longitudinal character of student leaving. Journal of Higher Education, 59(4), 438-455.

Tinto, V. (1993). Leaving college: Rethinking the causes and cures of student attrition (2nd ed.). Chicago: University of Chicago Press.

Tinto, V., & Goodsell, A. (1993, April). Freshman interest groups and the first year experience: Constructing student communities in a large university. Paper presented at the Annual Meeting of the College Reading and Learning Association, Kansas City, MO.

Tinto, V., & Love, A. G. (1995). A longitudinal study of learning communities at LaGuardia Community College. Washington, DC: Office of Educational Research and Improvement.

Tracey, T. J., & Sedlacek, W. E. (1985). The relationship of noncognitive variables to academic success: A longitudinal comparison by race. Journal of College Student Personnel, 26, 405-410.

University System of Georgia. (1994). Student retention and graduation. University System of Georgia. Atlanta, GA: University System of Georgia.

Van Gennep, A. (1960). The rites of passage (M. Vizedon and G. Caffee, Trans.). Chicago: The University of Chicago Press.

Velez, W. (1985). Finishing college: The effects of college type. Sociology of Education, 58, 191-200.

Waggener, A. T., & Smith, C. K. (1993, November). Benchmark factors in student retention. Paper presented at the Annual Meeting of the Mid-South Educational Research Association, New Orleans, LA.

Walker, D. K. P. (1988). Strategies for increasing retention of Hispanic students in community colleges (Doctoral dissertation, University of Texas at Austin, 1988). Dissertation Abstracts International, 49(9), 2515A.

Wall, M. (1996). From theory to practice: Using retention research to guide assessment efforts at a community college. Mays Landing, NJ: Atlantic Community College.

Webb, M. (1988). Freshman year retention at three campuses of a large urban community college district: 1983-1986. Community/Junior College Quarterly, 12, 213-242.

Webb, M. (1989). A theoretical model of community college student degree persistence. Community College Review, 16, 42-49.

Wells, R. N., Jr. (1989). The forgotten minority: Native Americans in higher education. Canton, NY: St. Lawrence University.

Whitaker, D. C., & Pascarella, E. T. (1994). Two-year college attendance and socioeconomic attainment: Some additional evidence. Journal of Higher Education, 65(2), 194-210.

Wilkie, C., & Kuchuck, S. (1989). A longitudinal study of the effects of a freshman seminar. Journal of the Freshman Year Experience, 1(1) 7-16.

Windham, P. (1994, August). The relative importance of selected factors to attrition at public community colleges. Paper presented at the 23rd Annual Conference of the Southeastern Association for Community Colleges, Savannah, GA.

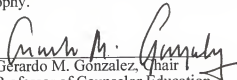
Woodward, R. W. (1982). The effects of a freshman seminar program on retention and program goals (Doctoral dissertation, University of Virginia, 1982). Dissertation Abstracts International, 43(5), 1449A.

Zarvell, R. K., Kuskie, M., Bertram, R., Noel, L., Levitz, R., & Jones, N. (1991). A theoretical and practical guide to student development programs in enrollment management. In Alan Galsky (Ed.), The role of student affairs in institution-wide enrollment management strategies (pp. 87-102). Washington DC: National Association of Student Personnel Administrators, Inc.


BIOGRAPHICAL SKETCH

James Arthur Watson was born in Miami, Florida. He obtained a Bachelor of Arts degree in fine art at Hofstra University in 1975. He obtained a Bachelor of Design degree at the University of Florida in 1982. Mr. Watson began work in the field of higher education at the University of Florida in 1982. At the University of Florida he has worked at both the J. Wayne Reitz Union and in the Office of Student Services. He has also worked as a graduate assistant in the Office of Academic Affairs for Community Colleges. In 1993 he completed an internship with the Division Student Affairs at the North Campus of Miami-Dade Community College. His responsibilities at Miami-Dade included teaching college orientation classes. In the fall of 1993, Mr. Watson began to work at Santa Fe Community College. Mr. Watson is a counselor in the Counseling Center.


I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.


Gerardo M. Gonzalez, Chair
Professor of Counselor Education


I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.


Mary Howard-Hamilton
Associate Professor of Educational
Leadership, Policy, and Foundations

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.


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Associate Professor of Counselor
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I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.


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This dissertation was submitted to the Graduate Faculty of the College of Education and to the Graduate School and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

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